

# THE MILLING WORLD

AND

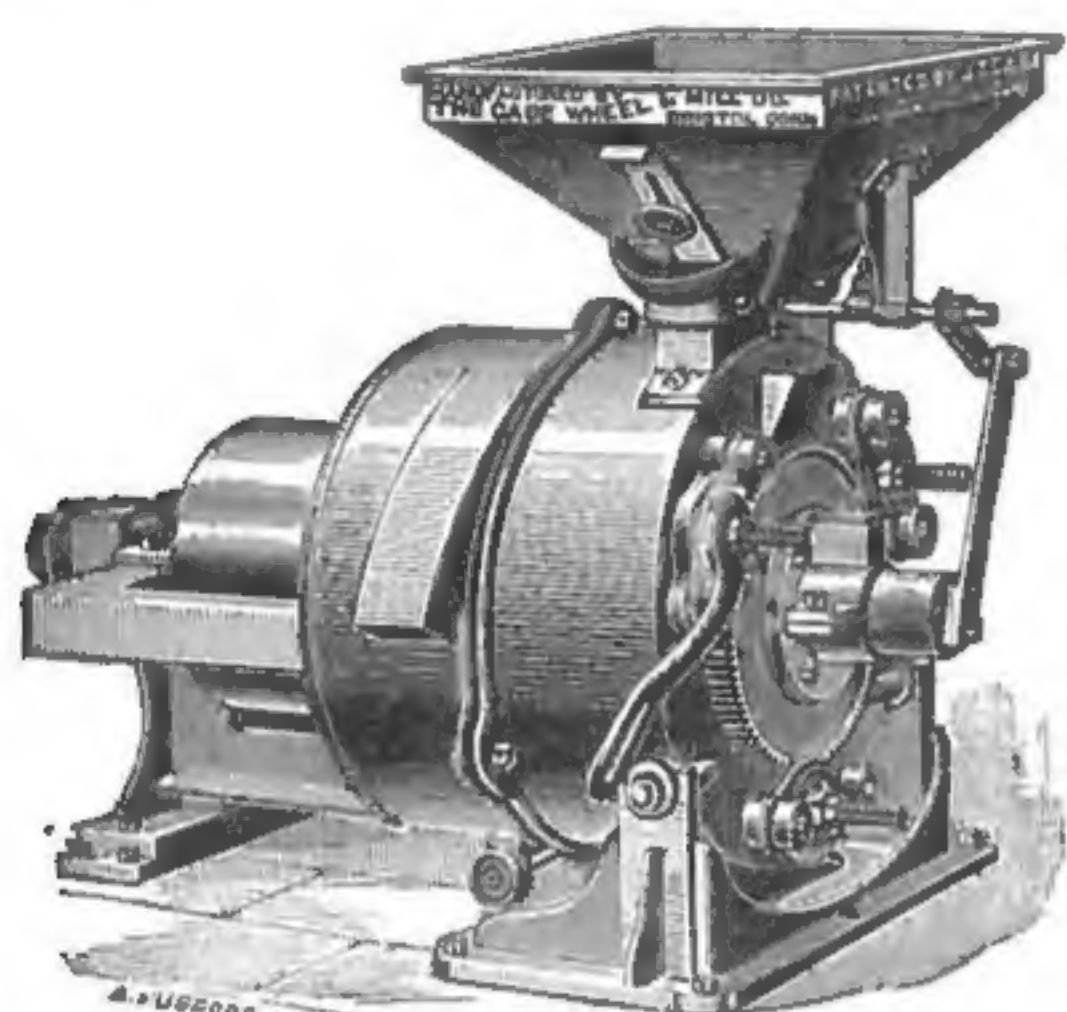
CHRONICLE OF THE GRAIN AND FLOUR TRADE

PUBLISHED EVERY MONDAY MORNING.

VOL. XXII. No. 9.

BUFFALO, N. Y., APRIL 28, 1890.

\$1.50 PER YEAR.



## VICTORY OVER ALL OTHERS. SINGLE & DOUBLE VERTICAL GRINDING MILLS. (J. T. CASE'S PATENT.)

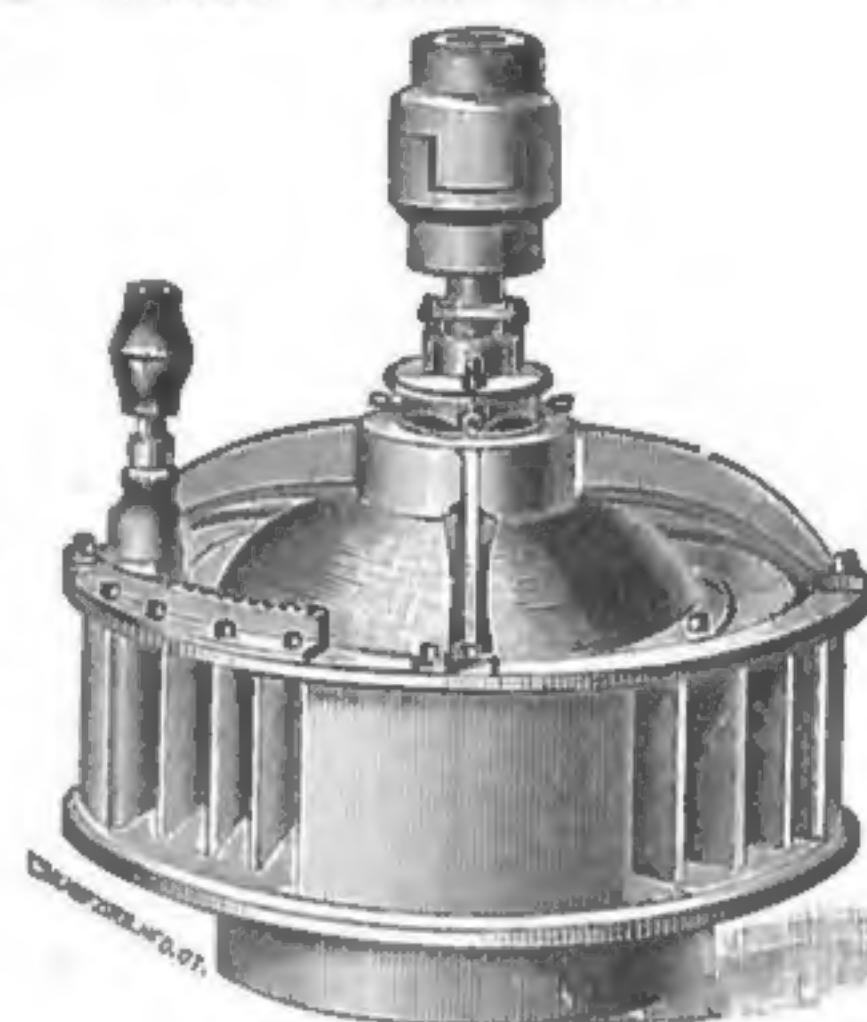
FACTS ARE MIGHTIER THAN ASSERTIONS. READ WHAT THEY SAY:

"Our 20-inch mill made by the Case Wheel & Mill Co. is in every respect satisfactory, easy to handle, and best results obtained of any mill in the country, with same quantity coal and power."—A. S. RUSSELL & Co., Meriden, Conn.  
"Superior to any mill in use."—GEO. WESTON, Bristol, Conn.  
"The best satisfaction in quantity and quality."—CHILD'S ELEVATOR, Manchester, Ct.  
"We take pleasure in recommending it."—GARLAND, LINCOLN & Co., Worcester, Mass.

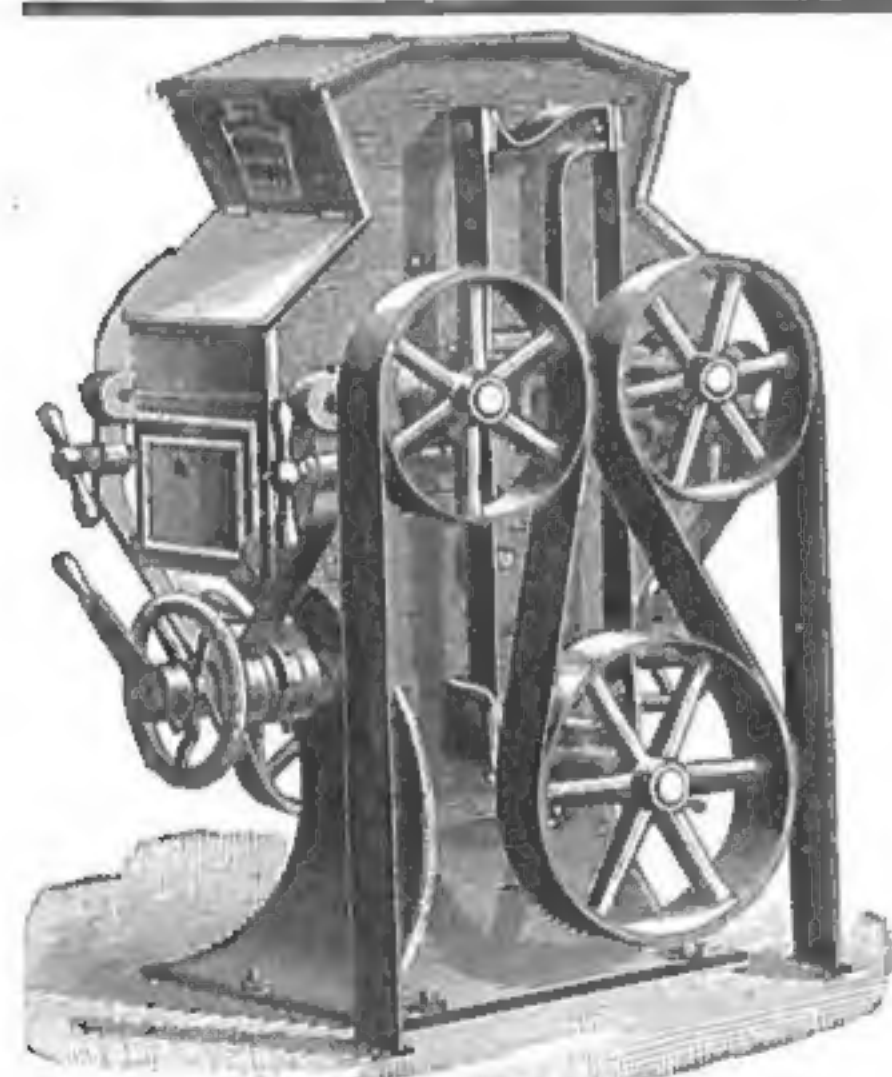
SEND FOR CATALOGUE—ILLUSTRATED AND DESCRIPTIVE.

## The Improved National Turbine Water Wheel

The Best for Economy; The Best for Durability; The Best for Power. ONE THOUSAND FIVE HUNDRED NATIONAL WATER WHEELS IN USE Prove that our Assertions are Supported by the Leading Manufacturers in the Country. Send for illustrated catalogue and prices to the manufacturers.



The Case Wheel & Mill Co., Bristol, Conn.



THE "KEYSTONE."

HONEST WORK.

GOOD FLOUR.

PERFECT MACHINERY.

THE J. B. ALLFREE CO., INDIANAPOLIS, IND.

FREETOWN, IND., April 7, 1890.

GENTLEMEN: We have had the mill you built for us in successful operation since November, 1889. We are glad to say that **WE HAVE ONE OF THE BEST 60-BARREL MILLS IN THE STATE.** Our flour will compete with any thing in the market; our percentage of low grade is very small and our clean up is as good as we ask. Your rolls, in our judgment, are superior to any thing on the market, being light running, easily adjusted and having other improvements which we fail to find on any other roller mill. Your "Success" Bolters, Centrifugal, Bran Duster, and in fact all the machinery gives perfect satisfaction. Every thing is smooth, cool and easy, making the least noise of any mill of same capacity we have ever been in when running. A farmer came in a few days ago and said that our mill did not make any more noise than an easy running sewing machine. We honestly believe that our line of machines has more points of excellence than any we have seen, which is evident from the fact that this is the second complete mill which you have built for us (or practically the firm), within four years, both of which are running, this latter being an improvement over the former one, and is what its name implies, a "Model Roller Mill." Wishing you the success you deserve, we are,

Yours truly,

TOBROCK, ALDENHAGEN & CO.

CLOSE FINISH.

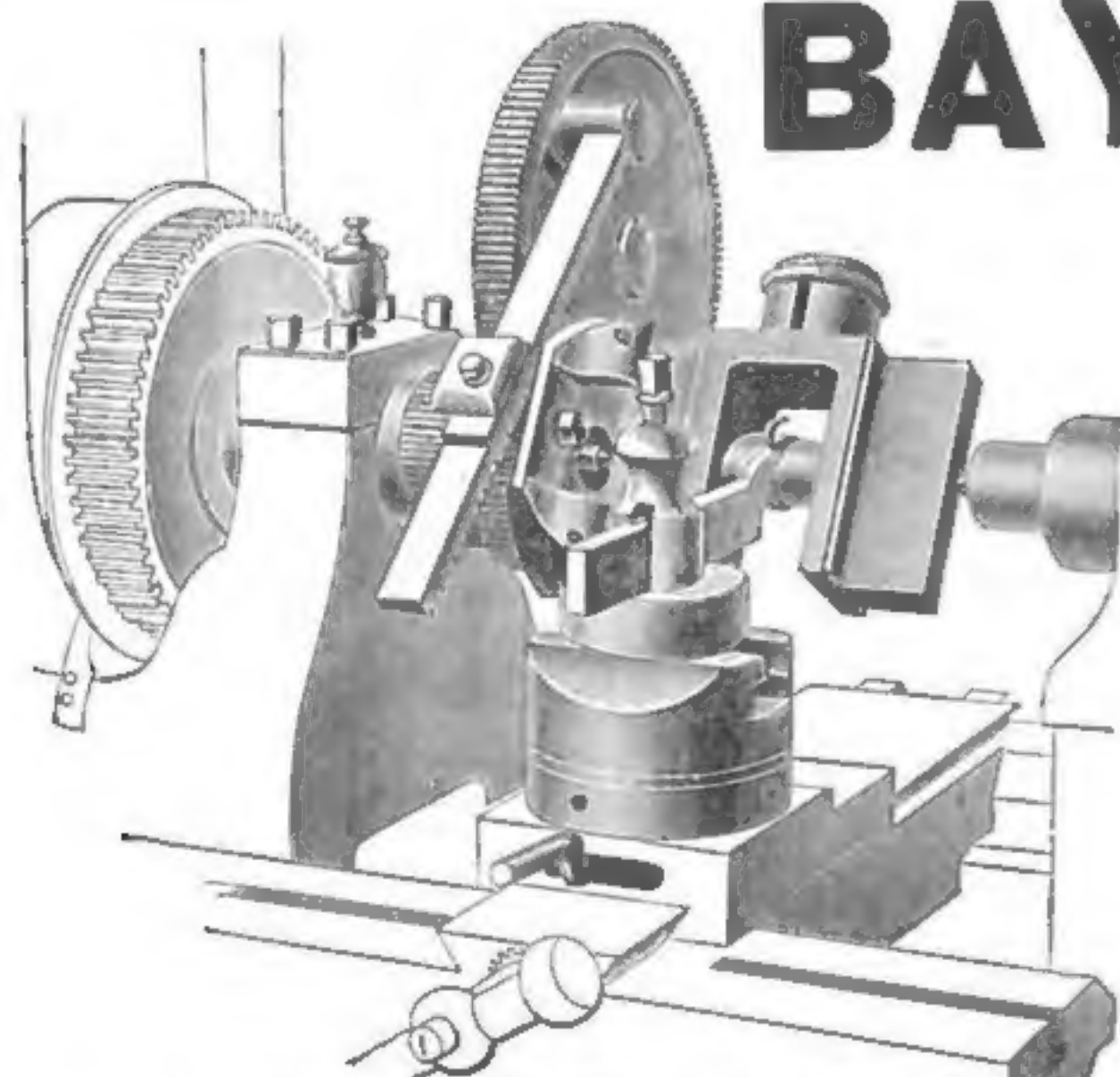
ADDRESS THE J. B. ALLFREE CO., 76 to 86 Shelby Street, INDIANAPOLIS, IND.

## BAY STATE IRON WORKS

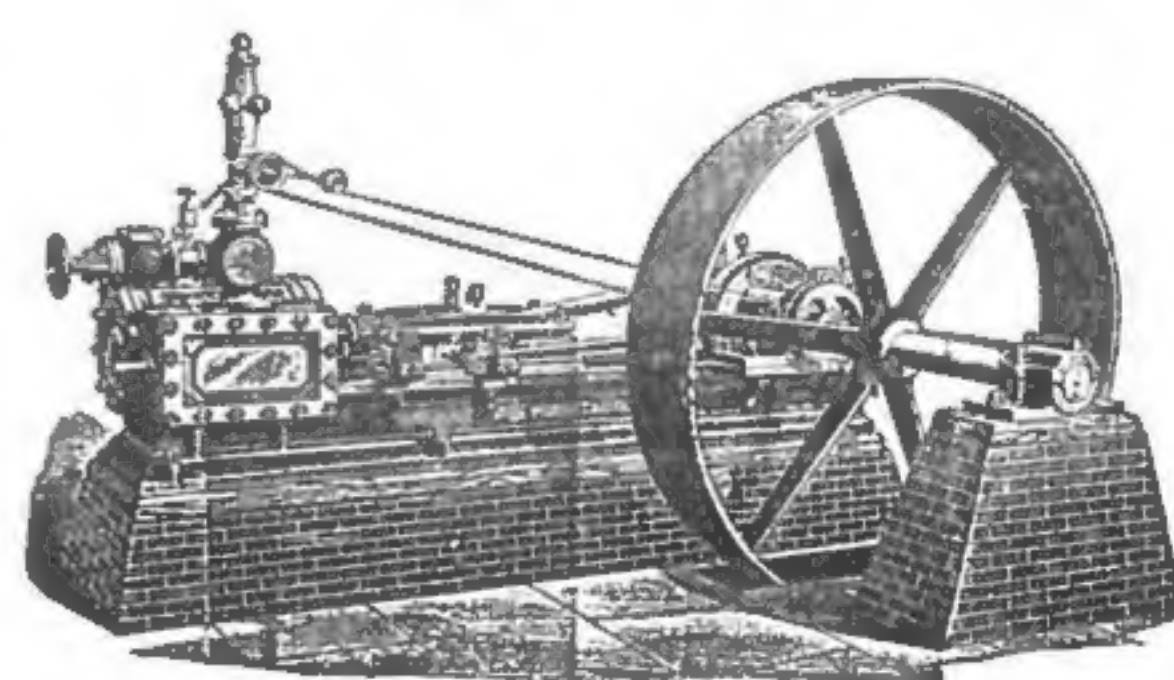
— MANUFACTURERS OF —

## Engines, Boilers & Hoisting Machines

Also the Patent Cross-Head Machine and Acme Cube Pipe Tongs. We make either Center or Side Crank Engines, on same bed. Make engines from 5 to 250 Horse-Power. Have over 3,500 Engines and Boilers and over 1,000 Hoisting Machines in use, and all giving good satisfaction. Send for Catalogue and Prices.



PATENT CROSS-HEAD MACHINE.



HORIZONTAL ENGINE.

Noble & Hall, Box 462, Erie, Pa.



# OFFICE OF CASE MANUFACTURING COMP'Y COLUMBUS, OHIO.

## The Case Roller Mills. Over 14,000 Pairs in Use.

PLEASE READ OUR DESCRIPTION OF THEM, EVERY STATEMENT OF WHICH IS ABSOLUTELY TRUE.

PLEASE READ WHAT MILL OWNERS SAY ABOUT THEM.



The accompanying cut is a correct illustration of our latest improved Four Roller Mill. For fine work, great durability, simplicity, and general excellence, they stand "head and shoulders" above all others.

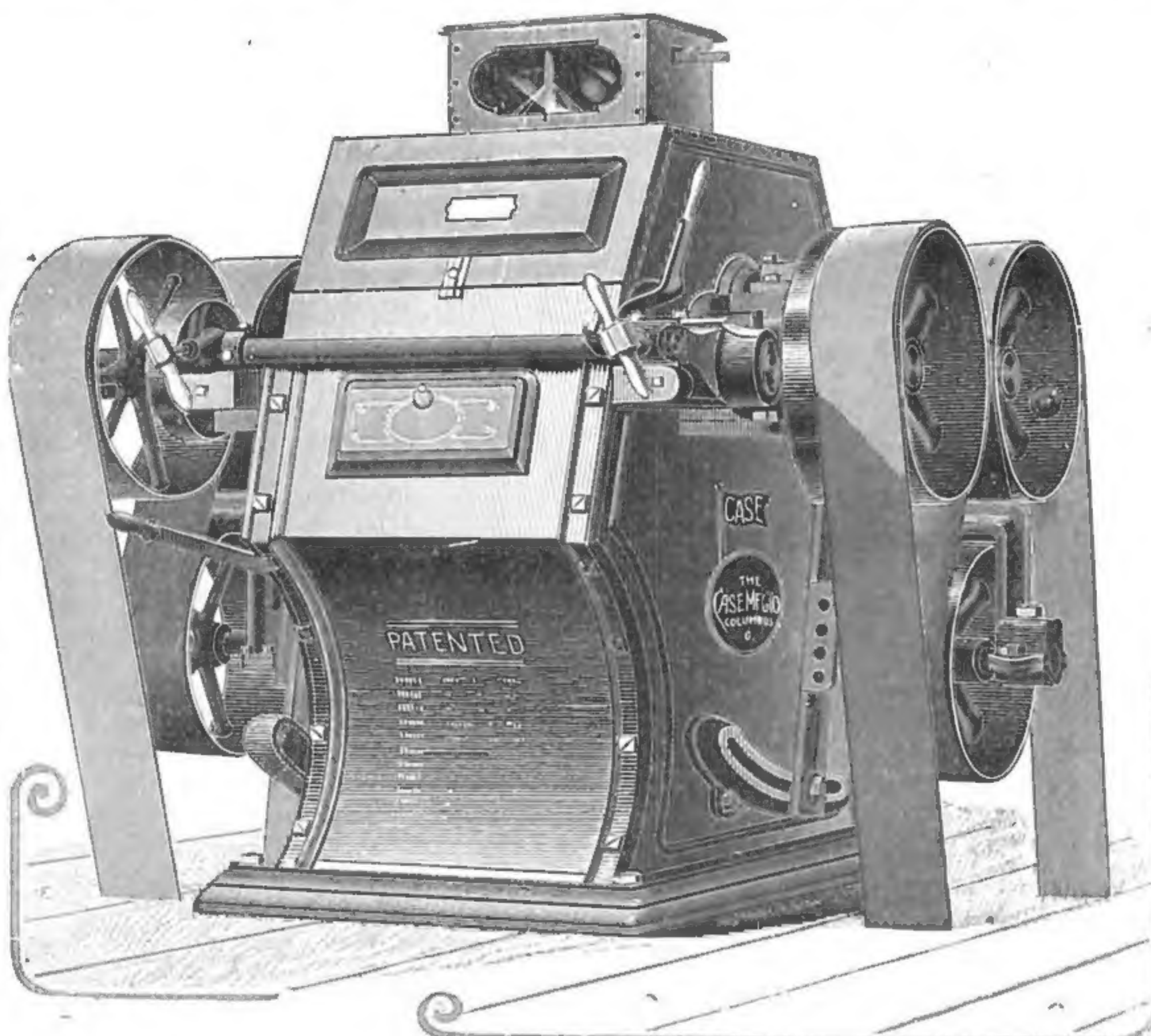
The frame is of iron with a heavy iron base.

The wood-work in top is of select cherry and black walnut, carefully shellacked and varnished.

The handles of adjusting screws and levers are finely nickel plated.

The joints are tight and dustless.

The adjustments easy, simple and perfect.



The roll bearings are wide and finely babbitted.

The belt drive is positive—no little short belts to slip.

The door for examining stock is a great convenience.

The arrangement for leveling rolls, simple and accurate.

The rolls can be thrown apart their entire length by one movement of the lever, and brought back again to original position, requiring no re-setting or experimenting.

Each machine is provided with our AUTOMATIC VIBRATING FEED, which requires no attention, and never fails to spread the feed the entire length of the rolls.



## Please Read These Testimonials.

LITCHFIELD MILLING CO., MANUFACTURERS OF FLOUR. }  
LITCHFIELD, ILL., Sept. 14, 1889.

Case Manufacturing Co., Columbus, Ohio.

GENTLEMEN: We are in receipt of your favor of the 11th inst., and in reply would say we have twenty CASE AUTOMATIC FEEDS on our Dawson and Allis Rolls, and we are greatly pleased with them. We have tested the Feeds thoroughly on different materials, and find they work as well on bran and germ and other soft materials, as they do on middlings. We have derived great benefit from the use of them, and can cheerfully recommend them to the milling fraternity.

Yours truly,

J. C. EDWARDS, General Manager.

OFFICE OF A. J. MILLER, PROPRIETOR WHITE ROSE MILLS. }  
DEALER IN FLOUR, GRAIN AND MILL FEED. }  
METAMORA, IND., Nov. 19, 1889.

Case Manufacturing Co., Columbus, Ohio.

GENTLEMEN: Your Feed arrived O. K., and placed it in working order in a very short time. You have furnished me a daisy Feed. After regulating your Feed, it needs no more attention. It pays for itself in one week over the "Roller Feed" in cleaning up the

stock, and also insuring the superiority at same time. I forward you the amount of bill.

Yours truly, A. J. MILLER.

TREZEVANT, TENN., Feb. 27, 1889.

The Case Manufacturing Co.

GENTLEMEN: We have five double stands of Rolls with Roller Feeds on all of them. A short time ago one of your agents induced us to try one of your Automatic Shaker Feeds. We find that it works much better than the Roll Feed, distributing the material the whole length of the Roll. We heartily recommend your feeds to any one wishing to put in new machinery.

Respectfully yours, FUQUA, HARRIS & CO.

W. C. MANSEFIELD & CO., MERCHANT MILLERS. }  
CLEVELAND, TENN., Aug. 29, 1889.

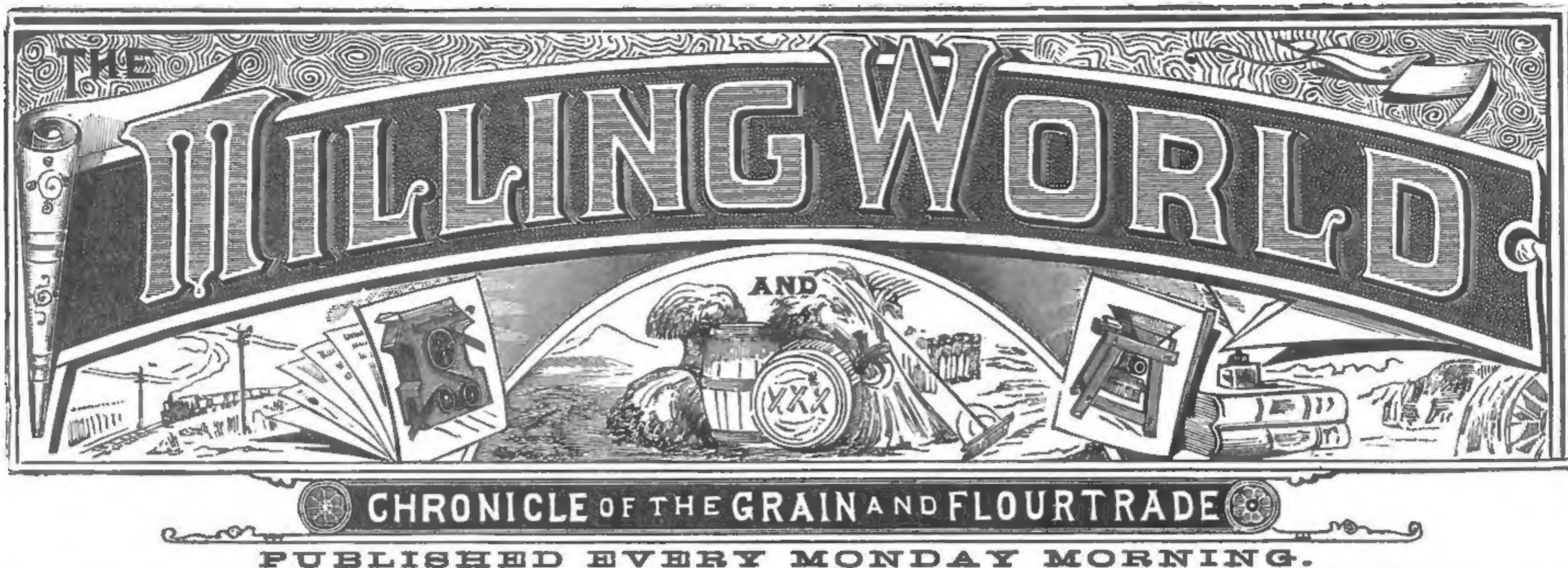
Case Mfg. Co., Columbus, O.

GENTLEMEN: If we were to build a hundred mills, we would not permit any other than the "CASE ROLL" to enter them. They are the best roll on earth.

Yours truly,

W. C. MANSEFIELD & CO.





VOL. XXII. No. 9.

BUFFALO, N. Y., APRIL 28, 1890.

\$1.50 PER YEAR.

OUR cotemporary in Kansas City, the "Modera Miller," recommends the new medicine, "Dimethyloxychinocine," for the Minneapolis "Yahoo" editor. What's the matter with prussic acid, Cliff?

It is amusing, even though somewhat fatiguing, to see the good advice and the envious sneers which our esteemed Milwaukee and certain other cotemporaries are always showering upon our esteemed Chicago cotemporary, the "American Miller." The fact seems to be that the Chicago publishers have hit about the correct plan of conducting a monthly milling journal, while their bilious monthly rivals seems quite as certainly to have hit the opposite plan. Hence the bilious growling, the envious complaints, the malicious sneers, and the incessant attacks of the midgets upon the giant.

THE authorities in the Argentine Republic have not yet taken steps to gather valuable information concerning areas sown to various crops. Everything in the Republic is at loose ends. The exaggerated reports floated in Great Britain are based on guess-work of the crudest kind, and on misrepresentation of the grossest kind. They are "bear" reports, in the worst sense of that term, designed to enable Great Britain to draw abundant supplies of good wheat, from other countries, at low prices. The most flagrant "bear" tactics witnessed among the American grain-gamblers are pale shadows in comparison with the solid falsifications indulged in by the British manipulators of the Australian, Argentinian and Indian wheat crop reports.

DURING the past five years there has been a continual complaint, or assertion, in some quarters that there were and are too many mills building in the United States. In spite of all, building is going on quite as rapidly as ever. Those who complain or croak about too much building should not forget that, along with the establishment of many new mills, goes the abandonment of many old-style mills, and that, with all the alleged excess of building, the apparent flour-producing capacity of the mills of the country has not been so enormously increased as the one-sided croaking implies. There will be no lull in mill-building for years to come in the United States. Most of the mills that are now building are admirably planned and equipped, and their owners and operators will be able to compete with the "milling centers." While it may be safe to say that there are mills enough in the United States, it is unsafe to assert that there are too many.

LATE reports from India indicate that the wheat crop of that country is hopelessly short. The shortage, comparing with the crop of 1889, is from 30,000,000 to 35,000,000 bushels, or a total larger than the whole export of the past year. Comparing with the crop of 1888, the shortage is 70,000,000 bushels. This year the grain is thinner, lighter and nastier than ever in quality. It looks like a heavy discouragement for the British boomers of India, but the results are precisely what THE MILLING WORLD predicted four years ago, when our American milling journals, swallowing unquestioningly the boom, the brag, the bluster and the unbounded exagger-

ation of the British journals, took it for granted that the Indian Wheat Juggernaut had already practically subdued the United States and usurped her place in the British markets. We pointed out the conditions which indicated that the climax of Indian production had been reached, and time confirms what we foretold concerning the Indian wheat enterprise. Paper booms do not grow real wheat.

SEVERAL things concerning wheat are definitely settled. First, the American winter-wheat crop has been shortened considerably by the winter freezings. Second, the insect pests threaten to be very active and ruinous, making further shortening not only possible, but highly probable. Third, the quality of the coming winter-wheat crop is likely to be considerably below the average. Fourth, the spring-wheat regions report bad drouths that have made the soil as light as flour or ashes, and nasty winds that have scoured large areas and scattered the dry soil and the planted grain up against the face of the sky. The most optimistic observer can hardly see a prospect of even an average crop of wheat, either spring or winter, next summer. Even after the spring wheat gets its toe-nails stuck into the ground firmly enough to keep the zephyrs from lifting it and sifting it in space, there is the danger of June and July freezes. Grain growers and millers know what that may mean. The peculiar individuals, who are lamenting that we have "too much wheat on hand," should curb their lamentations. The future may make them wish there were more, rather than less, grain in the country.

BRITISH millers have demonstrated their inability to oust foreign flour from British markets. During the past two years they have had a chance, if ever, to show what they can do in that line. Wheat has been at the lowest recorded figure for many months. Ocean freights have been very low. With abundant wheat and cheap transportation, the British millers have barely managed to hold their own. At this writing there are 1,000,000 sacks of foreign flour on hand in the United Kingdom, and the prospect of making British consumers dependent on British mills and independent of foreign mills is far from brilliant. The British millers can not reasonably hope to oust foreign flours from their markets hereafter, if they have not been able to do so during the past seasons, so favorable to them. Their raid on their American competitors has failed. Under all ordinary circumstances the United States will be able, for years, to send Great Britain large quantities of wheat grain and flour, both excellent in quality and reasonable in price, in spite of all the competition of all the world. Under all ordinary circumstances Great Britain will want and will take our surplus. Under extraordinary circumstances, for instance, serious wheat shortages or European war, she will need still larger supplies from the United States. She can not depend upon India. Russia is uncertain. Argentine Republic is insignificant. Canada is out of the race. Australasia is wholly unreliable. After exhausting the supplies of the remainder of the accessible world, she must still return to the United States for supplies. British milling seems to be virtually at a stand-still, and the causes of that stand-still are radical and unremovable.



# The DAWSON ROLL WORKS CO.

## FOUNDERS & MACHINISTS,

—MANUFACTURERS OF THE—

# Dawson Roller Mills

—AND FURNISHERS OF—

## CHILLED IRON ROLLS

WITH DAWSON PATENT CORRUGATION.

ALL STYLES OF FLOUR MILL ROLLS RE-GROUND AND  
RE-CORRUGATED WITH ANY FORM OF CORRUGATION.

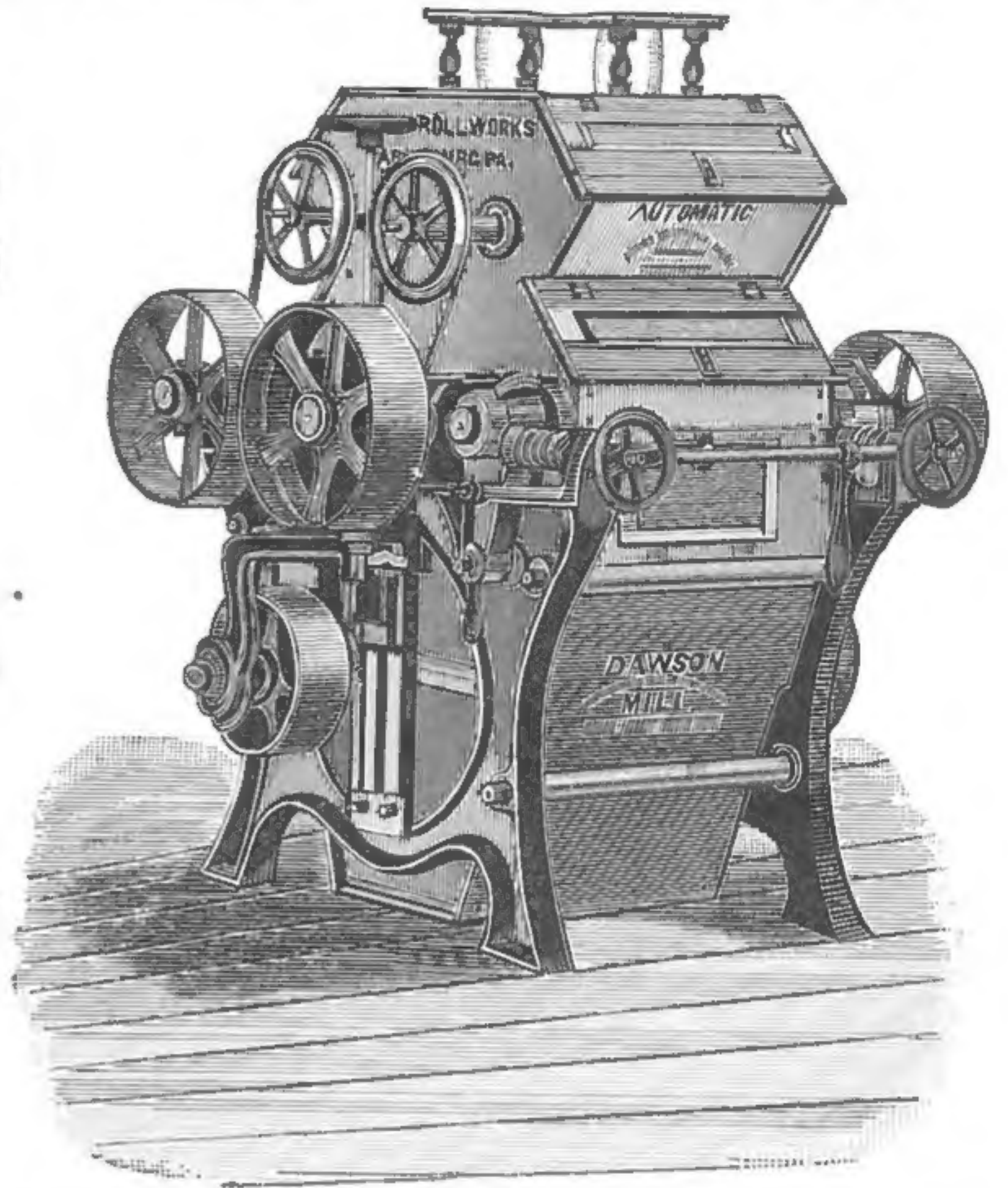
We have had large and extended experience in grinding and corrugating chilled rolls for milling, and have one of the largest and most improved plants in the country for this work, which enables us to meet the most exacting requirements of the trade promptly.

ORDERS AND CORRESPONDENCE SOLICITED.

# DAWSON ROLL WORKS CO.

South and Short Streets,

HARRISBURG, PA.



# The Cowles "Reliable" Sectional Wood Pulley



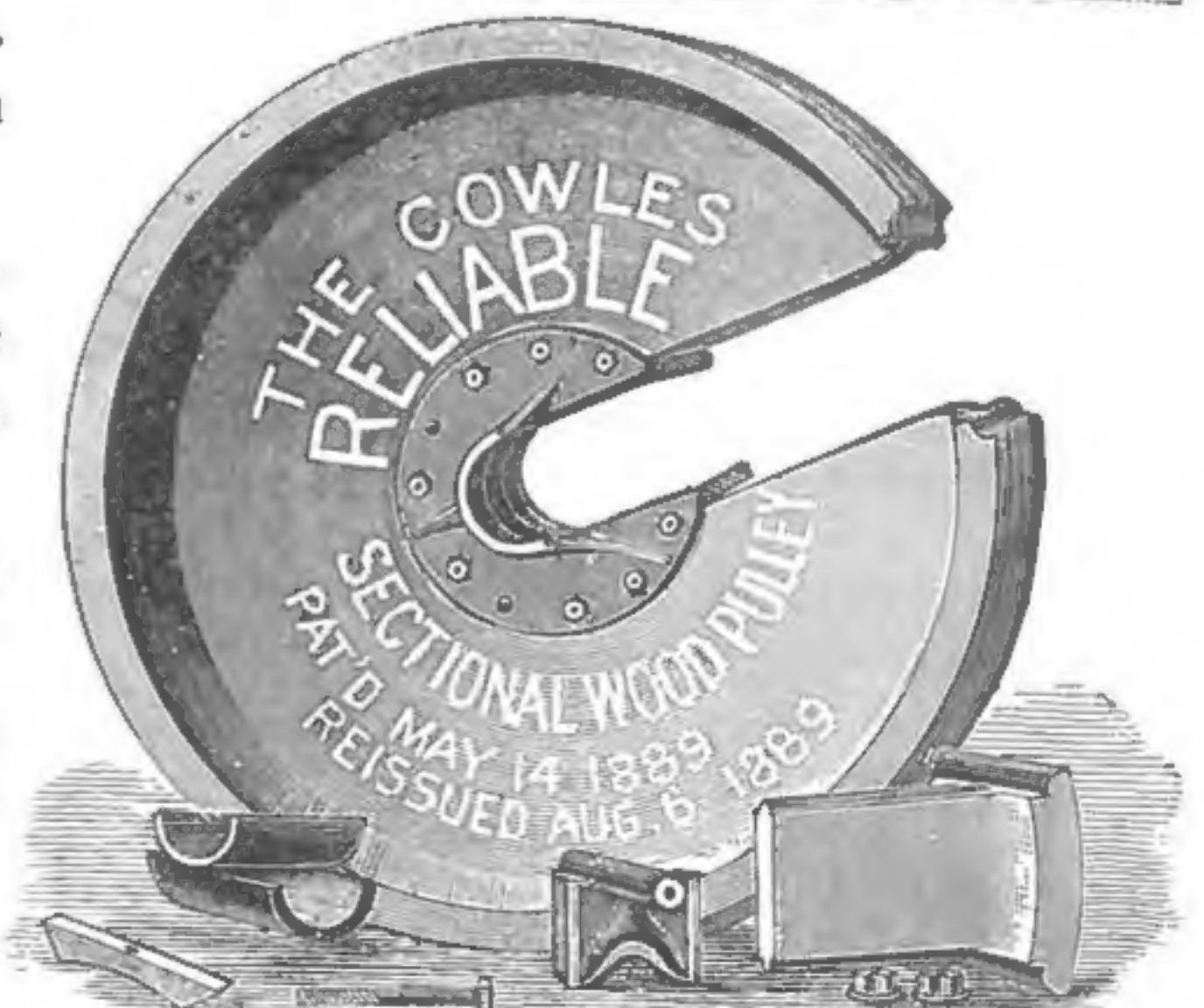
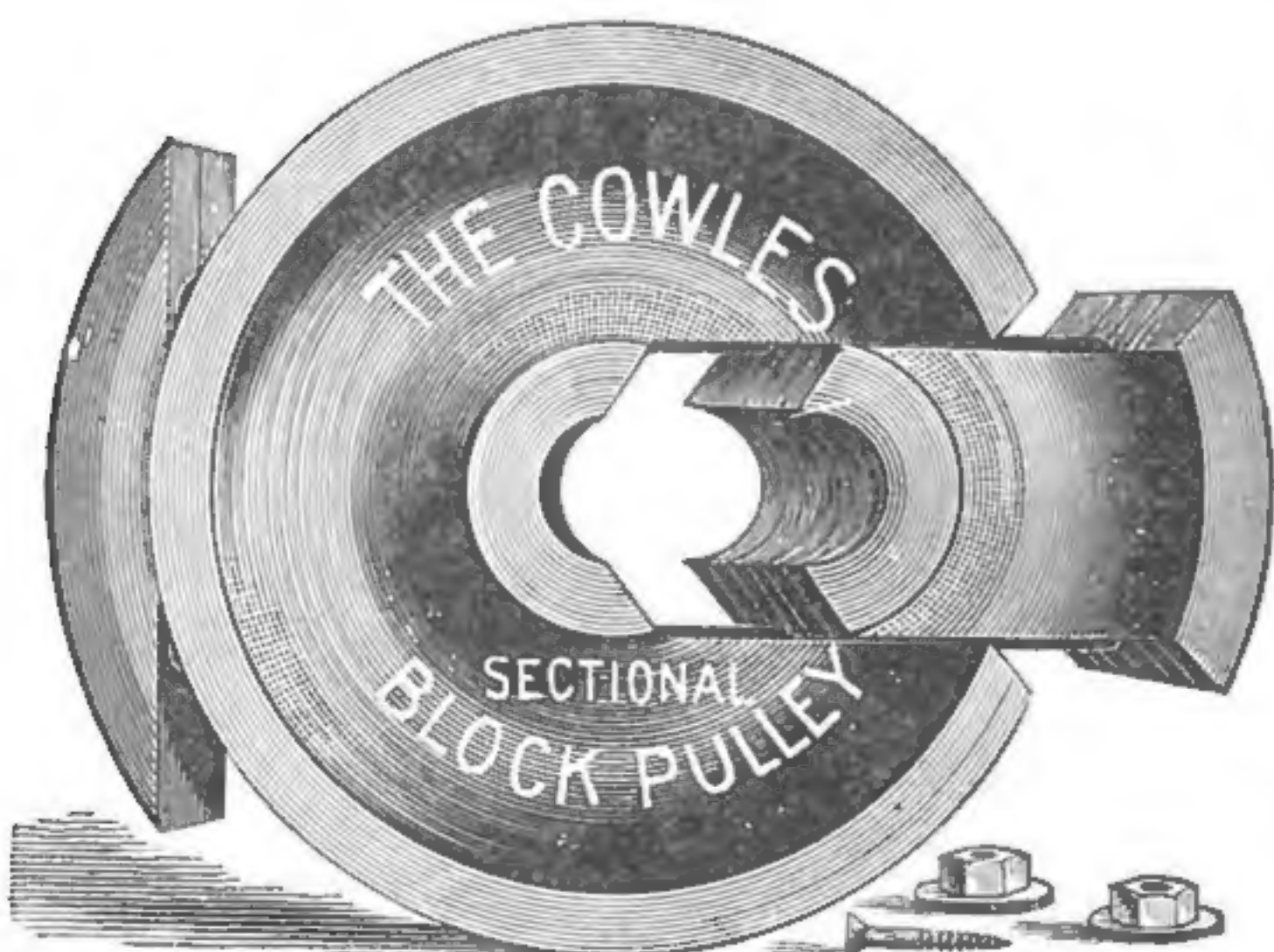
Web made of several layers glued together with grain crossing, and faced up on both sides. Iron flanges securely bolted to web. Rim put on after web has been trued up. Web and rim turned on inside and face, making perfect running pulley. Rim supported entire circumference. Positive self-gripping device for securing pulley to shafting, which is self-centering, and can not slip with wear.



A wooden rim pulley transmits from 30 to 50 per cent more power with same belt than an iron one.

Two-thirds lighter than iron, bearings will wear longer and the expense for lubricant will be less.

Having solid web, there is no air resistance. The "Reliable" can be placed on shaft or position changed in one-fourth the time required with any other pulley.



EDWARD GERMAIN, SOLE MANUFACTURER, SAGINAW, MICH., U.S. A.





PUBLISHED EVERY MONDAY. OFFICES: { Corner Pearl and Seneca Streets,  
Over Bank of Attica.  
McFAUL & NOLAN, - - - PROPRIETORS.  
THOMAS MC FAUL. JAMES NOLAN.

#### SUBSCRIPTION.

In the United States and Canada, postage prepaid, \$1.50 Per Year, in advance; remit by Postal Order, Registered Letter, or New York Exchange. Currency in un-registered letter at sender's risk.

To all Foreign Countries embraced in the General Postal Union, \$2.25 Per Year, in advance.

Subscribers can have the mailing address of their paper changed as often as they desire. Send both old and new addresses. Those who fail to receive their papers promptly will please notify at once.

#### ADVERTISING.

Rates for ordinary advertising made known on application. Advertisements of Mills for Sale or to Rent; Partners, Help or Situation Wanted, or of a similar character One cent per word each insertion, or where four consecutive insertions are ordered at once, the charge will be Three cents per word. No advertisement taken for less than 25 cents. Cash must accompany all orders for advertisements of this class.

Orders for new advertisements should reach this office on Friday morning to insure immediate insertion. Changes for current advertisements should be sent so as to reach this office on Saturday morning.

#### EDITOR'S ANNOUNCEMENTS.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

Correspondents must give their full name and address, not necessarily for publication, but as a guarantee of good faith.

This paper has no connection with a millfurnishing house and aims to represent the trade without prejudice, fear or favor.

Address all communications

**THE MILLING WORLD,**  
BUFFALO, N. Y.

Entered at the Post Office, at Buffalo, N. Y., as mail matter of second-class.

#### SITUATIONS WANTED.

Advertisements under this head, 25 cents each insertion for 25 words, and 1 cent for each additional word. Cash with order. Four consecutive insertions will be given for the price of three.

#### SITUATION WANTED.

Head miller with over 20 years experience want to make a change this spring. Address, A. MILLER, 67 Weaver Alley Buffalo, N. Y. Ad- 4t

#### WANTED.

A situation to run a 50 to 100-barrel roller mill. Pennsylvania, New York, Ohio and Michigan preferred. Address MILLER, Box 76, Union City, Erie Co., Pa. 86

#### WANTED.

A situation in some flouring or grist mill, by a man who has had good experience with the buhr system. Can furnish best of references. Address, THOMAS H. NICHOLAS, DeRuyter, N. Y. 811

#### SPECIAL ADVERTISEMENTS.

Advertisements of Mills for Sale or Rent, Partners Wanted, Machines for Sale or Exchange, etc., etc., cost 1 cent per word, for one insertion, or 3 cents per word for four insertions. No order taken for less than 25 cents for one insertion, or 50 cents for four insertions. Cash must accompany the order. When replies are ordered sent care of this office 10 cents must be added to pay postage.

#### FOR SALE.

One new Hominy Mill, capacity 5 to 8 barrels per hour. Address: J. C. DIXON, Pocomoke City, Worcester County, Md. 7

#### WANTED.

The address of Mr. Buhr Miller who was formerly a citizen of Prosperity removed to Adversity, and when last heard from was in Despondency looking for a job. By the will of his uncle Oliver he becomes heir to a modest fortune to obtain which he should address the FLENNIKEN TURBINE COMPANY, Dubuque, Iowa. Administrator. (Exchanges please copy.)

#### MILL MACHINERY FOR SALE.

One No. 0 Standard Combined Separator, Smutter and Brush Machine; new, best make.  
One 20-Inch Under-Runner Portable Mill, French Buhr Stone, capacity 10 to 12 bushels per hour; new, best make.  
One 14-Inch Vertical Feed Mill; best make, new, a bargain.  
One No. 6 Dustless Separator; new, a bargain.  
One No. 1 Full Rigged Combined Dustless Separator; new, a bargain.  
Four Corn Cob Crushers, right or left hand, driven from above or below, best make; capacity 40 to 60 bushels per hour.  
Three No. 1 Corn Shellers, capacity 200 to 300 bushels per hour; new.  
One No. 2 Purifier. New. Best make. A bargain.  
One 20-Inch Portable Mill.  
One 18-Inch Double Gear Portable Mill.  
For particulars address, FRANK SMITH, care of THE MILLING WORLD, Buffalo, N. Y. 5tf

## FOR SALE CHEAP.

One 36-In. Iron Frame Portable Mill, French Burr Stone, Used about 2 months.  
One 20-In. Vertical Mill, French Burr Stone, Used about 30 days.  
Three Pair 42-In. Old Stock Feed Stones.  
FOR PARTICULARS ADDRESS,

**SAMUEL CAREY, 17 BROADWAY, NEW YORK.**

#### FOR RENT.

Clinton Mills, at Black Rock, Buffalo, for rent on reasonable terms, recently repaired and put in good order. Apply to CHAS. DANIELS, over 311 Main Street, Buffalo, N. Y. 6tf

ANNOUNCEMENT is made by Mr. George T. Smith, of Jackson, Mich., that he is preparing to present to the fraternity "a machine that will revolutionize mill-building." Well, if the "revolution" implies greater efficiency and economy, it will be welcomed by the millers of the United States.

THE American grain-gambling "bears," having suffered serious reverses in attempting to control the American crop, present and prospective, of wheat, should direct their attention to European crop conditions. If they can not make American wheat cheap by insisting that dead fields are going to yield an extraordinary harvest next summer, they can take a hack at it indirectly, by booming up the crop in all other countries, to prove that no American wheat will be needed abroad.

OUR perfervid and purblind Milwaukee cotemporary remarks: "Mr. Frank Barry has shown himself to be a fitting successor of Mr. Seamans as secretary of the National." That is the hardest thing yet said about Mr. Barry by any milling-journal. Is he a "fitting successor," or a fighting successor? Does he "fit" because he carries out Sam's ideas as secretary, or because he represents opposite ideas? It is the prevalent opinion that Mr. Seamans aided powerfully in reducing the "National" to its present lamentable condition of innocuous moribundituousness, and it is a question whether it is a compliment to Mr. Barry to intimate that he is "fitting" into Sam's old-time niche. Colonel, do be a little more explicit!

THE Blodgett decision in the Consolidated Roller Mill Case is being widely published. Those millers who are asking for information concerning the intentions of the Consolidated people know just as much about their intentions as we do. They say that they do not accept the Blodgett decision as final, and that they will carry their case as far as possible. We can not inform our correspondents just how far they really mean to go, nor even whether they will go any further than they have gone. We merely give their announcement for what it is worth. Millers need not fear a monopoly or advanced prices for roller-mills, in case the Consolidated people win all for which they are contending, as there are many good mills made in the United States that are entirely outside of anything and everything claimed by the Consolidated. Even with absolute victory on every claim, it would not be possible for the Consolidated to advance prices. It is not worth while to lose any sleep over the case. The Gresham and Blodgett decisions are not likely ever to be reversed.

MINNEAPOLIS proposes to eclipse all former records in the way of entertaining those who visit that city, in June next, to attend the convention of the Millers' National Association. Every inducement will be offered to attract a "crowd," and probably the attendance may be large. However large the attendance may be, and however grandly they may be entertained, the Millers' National Association, as a body, will not be benefited by the splurge, unless the managers show that they mean to make a new departure, unless they "sit down on" that flour-barrel-voting clause in the proposed new constitution, and unless they show a programme of exercises calculated to cover something besides jute bags and bills-of-lading. The main trouble with the "National," as at present mismanaged, is that it has ceased, totally and undeniably, to represent the average miller of the United States. The millionaire snobs in the body have openly spoken their contempt for the small millers, and the small millers can do nothing but resent the unfair treatment. Now let the "National" reverse. Let it make a genuine millers' association. Let it show that it is no longer the weapon of a few exporters, but the friend and aid of every miller in the country. This course, inaugurated at Minneapolis in June next and carried out strictly thereafter, would end in creating a really "national" association.



**DETACHED CENTER-CRANK ENGINES.**

The accompanying engraving illustrates the improved detached center-crank engines built by Messrs. Noble and Hall, proprietors of the Bay State Iron Works, of Erie, Pa. Attention is invited to these engines. With them are included governor, throttle-valve, oil and tallow cups and drain-cocks. The pulleys, or fly-wheel and pulley are all turned and balanced. These engines are strong, heavy, well-made and durable, with wide bearings and large ports. The piston and valve-rods are made of steel. The center-crank is made of hammered iron. The crank is cut out of a solid forging, and the crank-pin is made extra-large. The heater is independent. It will save 10 per cent. of fuel, and the makers claim it is the cheapest fuel-saver about any steam-plant. The pump is independent. The cylinder has self-drainage and thereby avoids using cylinder-cocks and hammering of water in the same. The cylinders have cast-iron jackets, that prevent radiation, one point of economy. The piston has steam-packing, the best in use. All parts of the engines are made to duplicate. All engines are tested by steam-pressure and run at the shop until they are in good running order.

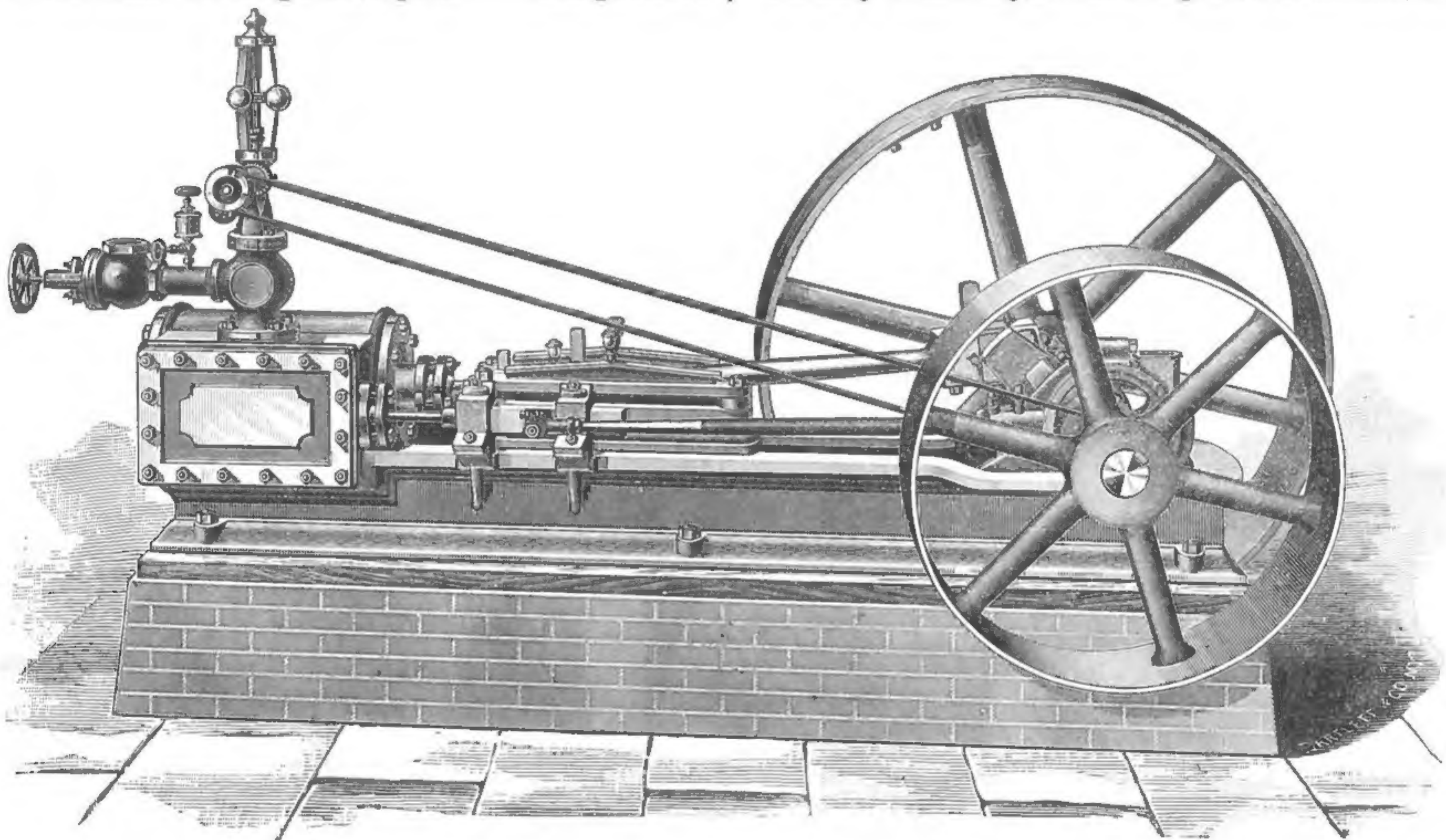
**POINTS IN MILLING.**

RECENTLY I met an old miller who seemed to me to be entitled to the name "Kicking Philosopher." Nothing seemed

into his cleaning-machines, they would go through all right and come out flour, just because he's lucky. You could n't bankrupt him, because he's lucky."

"Now look at H—— M——, ten miles west from here. He's unlucky, and all the world can't help him or make him successful. He inherited \$20,000 in cool cash. He understood milling. He built a mill. A gale knocked it down when half built. When he finally got it to working, he began to loose money. Farmers cheated him on grain. His machines break down without cause. His output displeases all his customers. His customers fail to pay him. His mill has burned once and been damaged a second time by fire. He had no insurance. To-day he's got a mortgage that covers him all over, and all because he's unlucky. It is not his fault, it is his misfortune. He's a regular Humpty Dumpty, he'll never be able to stand, simply because he was born unlucky!"

THE "Kicking Philosopher" really believed what he said about his two neighbors, but I found, on visiting the "lucky" and the "unlucky" millers, that the "luck" in the one case was just what I thought it would be, the result of sound judgment and enterprise on a reasonable basis, while the "unlucky" man was just what I expected to find him, the right



NOBLE & HALL'S IMPROVED DETACHED CENTER-CRANK ENGINES.

to suit him, in milling or out of it, in the world or out of it. Every comment he made on any subject was a kick, hence the term "Kicking." Nothing seemed to worry him. Even the things he most kicked against seemed to amuse him thoroughly. He complained, but he laughed at the folly and futility of his own complaints, hence the term "Philosopher."

THIS ancient kicker kicked all over the milling field, philosophized over the uselessness of kicking, and settled down to a running comment on milling in general. Said he, among other things: "Now milling goes by luck. Nothing but luck governs the whole business. A man born lucky can not fail in a mill. A man born unlucky can not succeed in a mill."

"LOOK at J—— W——, ten miles east of me. He is a lucky man, is making money in milling. But he is lucky and would make money in any line simply because he is lucky. He borrowed \$10,000, built a mill, bought his grain, hired a miller, and started in. He is piling up the ducats. A barn right by his mill burned, but his luck saved his mill. His customers, some of the largest, failed, but they paid him before they failed. If you were to pour a ton of cobble-stones

man in the wrong place. The "Kicking Philosopher" had generalized on insufficient information. His ideas of luck and its opposite were confused.

BUSINESS operations, especially those so complicated as milling, do not go by luck. At least they do not go very far by luck alone. The man who is to succeed in milling must plan, foresee, calculate, and understand thoroughly what he proposes to do and how to do it. The workman who tries to drive a nail, while he is looking the other way, will make quite as good a job of the driving as the miller will make of grinding and selling if he attempts to do something else while grinding.

SUCCESS in milling is the rule. Failure is the exception. Neither success nor failure is attributable to luck. I am convinced of this, in spite of what my friend, the "Kicking Philosopher," may say to the contrary. Luck means careful work, constant watchfulness, common-sense in every deal. Unluckiness means the opposite.

WHAT has become of our friends, the "yield" fiends? I have not seen a very recent "startler" on 3:50, or 3:55, or 4,



or 4:02 to the barrel. What's up? Have the 4:02-yielders gone to meet the perpetual-motion fiends?

I NOTICE that the practice figures do not agree with the theory figures in yields. An honest confession, after careful investigation, would reveal the fact that nine out of ten flour-makers are forever closer to 5 than to 4 bushels of wheat to the honest barrel of good flour. I have tried to "run down" several of the big-yield claimants, but their yields never materialized, and it is still a problem for the cranks to get out of any given quantity of grain a quantity of fine flour that was never in the grain.

IF "paper wheat" could be used for milling, what merry work the grain-gamblers would make for the millers! Imagine 3,000,000 bushels of actual wheat, the May option, for instance, in the hands of the "paper wheat" men. Inside of six months they swell the sales of May wheat from the actual 3,000,000 bushels to the grand total of 100,000,000 bushels! What is the nature of the 97,000,000 bushels "handled"? Is it wind? Is it water? Is it paper? Whatever it is, it can not be ground into flour. It has one power, that should be kept in sight. Although this "paper wheat," grown in the pandemoniac gambling pits, can not be ground, it can, and it does, grind the men who grow it! Occasionally we see it grind the gamblers who are on the wrong side.

How completely the discussions of systems have ended! Have the "longs" given up the contest in despair and disgust? Have the "shorts" carried the day so completely that the "longs" have nevermore a word to offer? Have the opponents of medium and short system mills awakened to the folly of declaring impossible, improbable, impracticable and ruinous that which in hundreds of mills is daily proved to be possible, probable, practicable and profitable? It looks so!

I HAVE one amusing recollection of the system discussion that raged so furiously several years ago. There was one "long-system" advocate who did considerable scribbling on the subject, and his scribbling was approvingly quoted in certain quarters. He was fiercely "long." He was furiously, incessantly, acridly, morbidly, garrulously "long." He did not seem to be able to be as "long" as he wished to be. He was all gall and wormwood to the "short" idea and its advocates. They were, in his estimation, all fools. I happened to be in the vicinity of the lair of this particularly "long" tiger, and I went to visit his mill, expecting to find a full roller plant running on any number of reductions from 20 up to 5,000. My surprise was almost fatal to me, when I found the plant to be an old, very old, buhr-mill, with two run of stones, and with never a suggestion of rolls or any other modern appliance anywhere about it!

THIS particular "long" advocate had never even seen a roller plant in operation! Notwithstanding that fact, he yet felt prepared to do valiant battle in the system struggle that was raging, and he never felt that he was doing anything ridiculous in advocating one system and opposing another, while knowing absolutely nothing of either!

WHAT new wrinkle does our irrepressible old friend, George T. Smith, propose to bring out now? I see that he announces something that will make a great change in mill-building. What is it? Mr. Smith will command the attention of a large audience in case he has a novelty of decided utility.

I AM more and more impressed, as I go about in mills, with the idea that the average mill-owner does not keep himself so thoroughly informed about the doings in his plant as he should. I have asked the owner of a good-sized mill if he knew of a certain leakage or wastage at a certain point in his mill, and he has replied: "O! I don't know! I can't take time to nose around the mill, looking for faults here and there. It's a small matter, any way, and it would not pay for the trouble of correcting it."

IN that case the leakage was not a small one. It was a large one. It meant only a few cents a day, but it meant hundreds of dollars a year, and it was only one of several

leaks. Some were larger. Some were smaller. The owner, who could not, according to his erroneous idea, spare or afford the time to examine the leaks and check them, was losing every year a sum large enough to pay a hundred or five-hundred times the amount it would cost to stop the wastage. Such cases of wasting at the bung, while imagining a great saving at the spile, are frequent.

Mr. Owner, do not despise the "small things" in your mill. Everything in it represents a cent or a dollar of your money. Every grain of good wheat wasted, every pound of good flour lost in dust or bran, every pound of coal burned needlessly, every spurt of steam into the air without cause, every bit of silk senselessly torn or thrown away, means the absolute wastage of just their value in dollars and cents. You can not afford to throw away money needlessly in these things, as you certainly will unless you keep a sharp eye on every detail.

#### THIS SHOULD BE PROVED.

Says the Detroit "Free Press" of April 23: "Some representatives of Detroit grain houses have just returned from an extended tour through Michigan, examining the wheat crop and talking with grain buyers and farmers about wheat prospects. The condition of the Michigan wheat crop, as given in the government report, is 67 per cent., which, the Detroit men state, is fully 20 per cent. too low. There are numerous bad patches of wheat, but the average by no means justifies the unfavorable reports sent out. In inquiring into the reason why such bad reports have been given to the public, the statement was made that leaders of the Patrons of Industry and Farmers' Alliance had sent out circulars to those who make out the reports, instructing them to make the average as low as possible. This is done, it was said, because the Government reports are published to the world, and the buyers of wheat in foreign countries are informed how much wheat America has for sale. When the crop is reported large the effect is depressing in prices, and, therefore, according to the informants of the Detroit men, the Patrons of Industry are taking this means to counteract the effect by placing the average as low as possible."

#### ENGINE AND BOILER DEFECTS.

According to the statement of an experienced inspector of boilers and engines, who was recently interviewed by the New York "Safety Valve," the commonest defects to be found about the engine come from improper working or regulation by the governor, as the journals and bearings of the governor are quickly worn out if not looked after. The governor should be regularly cleaned, washed off and well lubricated. Engineers often think that their pistons and valves are not working to the best advantage, when the fault is really with the governor. Sometimes pistons leak, an effect of unequal and excessive wear. Belts too tight cause a deal of trouble; a little sag is a good thing for bearings, as they very often get hot because the belts draw too tight. As to boilers, laminated plates over furnace and bridge wall cause endless trouble, complaints come from this cause outnumbering all others. The next thing to demand notice is deposit, which 90 per cent. of boilers are subject to. This causes bagging, burnt plates, opened seams and rivet checks. Another bad fault comes from having the feed and blow of the boilers at the front end. This allows the back end to become covered over with sediment, due to poor circulation. This should never be so. There should always be some means by which the boilers can be thoroughly cleaned and inspected. The man-hole-plate in the front head is an excellent thing. Another great fault in construction is not leaving room enough to clean boilers. Where there is any trouble or labor in getting at the parts, the engineer does not give the boiler the attention it requires, and will not clean any more than is actually necessary; but where parts are easily accessible, and there is no trouble in keeping the same in good condition, the engineer will take pride in this part of the work. Circular



bridge-walls should be condemned, for the reason that they are of no use and do not add to the combustion. As the fire is perfectly level, the bridge-wall should also be level, so that part of the shell directly over the bridge-wall can be readily examined by the engineer or inspector at any time. Steam-gauge pipes should also have stop-cocks and blow-off cocks, so that the sediment and dirt can be blown out of the gauge-pipes, or the gauge taken down, tested and replaced while there is steam in the boiler. Many boilers are injured by having fire lines too high, that is, above the gauge-cocks; this will cause cracks, lamination and checks. The metal should not be exposed to fire where there is no water on the opposite side. After the engineer gets the engine working well and in good order, he should not tinker with it, but let him put his screw-wrench on the shelf and not take it down until it is actually necessary.

#### COLONEL CAWKER WRITES AN EPITAPH.

Resignation has become the order of the day with Samuel H. Seamans, of Milwaukee, Wisconsin. Since resigning the secretaryship of the Millers' National Association last year, Mr. Seamans appears to have gone out of the milling line, and he wound up his career as a miller by resigning the secretaryship of the Wisconsin Millers' Association, at the recent death of that body in convention (not) assembled at Milwaukee. It will be observed that Sam "resigns" just about the time dissolution appears on the scene. His last resignation inspired our ever-funny Milwaukee Cotemporary, "The United States Miller and Milling Engineer," to go into rhapsodies over him, and here is one of the scintillant gems in Colonel Cawker's superamiable epitaph on Sam:

"He has fought their cause, suffered personal abuse from unscrupulous or deluded milling journals, for their sake, but has serenely lived through it all, and has seen the boomerangs thrown at him, invariably, return with redoubled force and strike their projectors. His record is unimpeachable, his integrity unmarred, and his course of action unanimously vindicated. He can afford to rest upon the laurels he has so hardly won."

Even Sam must smile when he reads that gem! The first fact is Sam has "fought their cause" every time, fought it to death. The next fact is that, instead of "suffering personal abuse from unscrupulous or deluded milling journals," Sam has invariably earned and received the friendship of those classes of milling journals. The third fact is that no "boomerang" was ever thrown by any member of the milling press at Sam. The fourth fact is that "records" are always "unimpeachable." It is the makers of records who are "impeached." The statement that his "integrity is unmarred"—what does it mean? The last fact is a fact, namely, that Sam's "course of action unanimously vindicated." Of course it did! Sam was always "unanimous" in vindicating Sam's course of action! Recall the Buffalo Bogus Resolution matter, for instance. O, Colonel Cawker! You are about the most humorous being in the United States of America! Even Sam will smile as he lies in the tomb of miscellaneous secretaryships, peremptorily resigned, and glances up at the epitaph you have whitewashed onto his mausoleum. You mean it for dead earnest, of course, but the language will persist in getting away with you. It was always that way with you, and no revolution in milling seems to enable you to grind out a suitable verbal dress for your exalted ideas.

#### BALTIMORE GRAIN DEALERS MOVING.

Baltimore grain dealers have been agitating the necessity of adopting some uniform standard by which wheat can be graded at the elevator in all these seaboard cities. It is claimed that, while Baltimore inspections are honest, other cities "have an ingoing and an outgoing system." When admitted into the elevators, it is charged, the wheat is made of an inferior grade to that given it when offered for shipment. "The western seller is the loser, while the European miller gains the benefit. The advantage to the city which resorts to such a practice is that it becomes the purchasing point for European dealers." So says a Baltimore paper, and it is probably correct in many instances. The trouble is that

dirty grain comes to the elevator, is graded on that score and grades low, but when it comes out it is clean and grades high, selling for a proportionately better price. The western seller is the loser, 'tis true, but the European buyer pays the elevator man for cleaning the wheat, or rather, for making it grade high. The grain might just as well be cleaned on the farm and thus grade high when sold.

#### GERMAN MILLING POETRY. EIN SONDERBARES MUEHLCHEN.

In einer Schlucht am Berge  
Liegt wohl ein Muehlchen klein,  
Doch sieht man keinen Mueller,  
Kein Muellers-Tochterlein.  
Und dieses kleine Muehlchen  
Hat weder Stuhl noch Stein,  
Doch hat es einst gemahlen  
Viel fremde Fruechte klein.  
Man hoert kein Wasser rauschen,  
Kein Dampfmaschinchen geh'n,  
Doch stets muss ich voll Wehmuth  
Die kleine Muehle seh'n.  
Als sie noch knarrend kreiste  
In ihrer guten Zeit,  
Da hat, was sie gemahlen,  
Manch' menschlich Herz erfreut.  
Bei ihrem muntren Klappern,  
Da kamen die Basen all',  
Und um sie her ertoente  
Viel holder Stimme Schall.  
Doch heut' liegt sie verlassen,  
Bon Wetter wild umtost,  
Es frist an ihren Theilen  
Die Faehniss und der Rost.  
Du staunst und willst mich fragen?  
Dies Muehlchen wunderbar,  
Ich will es Dir nur sagen.  
—'ne Kaffeemuehle war.      FRANZ MUELLER.

#### LITERAL ANGLICIZATION. A SINGULAR MILLKIN.

In a hollow at the mountain  
Lies well a millkin small,  
Yet sees man no miller,  
No miller's daughterlin.  
And this little millkin  
Has neither chair nor stone,  
Yet has it once ground  
Many strange fruits small.  
Man hears no water rush,  
No steam-machinekin go,  
Yet always must I full melancholy  
The little mill see.  
As she still creaking circled  
In her good time,  
Then has, what she ground,  
Many manly heart rejoiced.  
By her cheerful clatter,  
There came the relatives all,  
And around her here resounded  
Much of cheerful voices' sound  
Yet to-day lies she forsaken,  
Of storms wild roared around,  
It eats on her portions  
The rottenness and the rust.  
Thou starest and wilt me ask?  
This millkin wonderful,  
I will to thee only say,  
A coffee-mill was.

#### LESS WHEAT IN CALIFORNIA.

California will produce far less wheat than usual this year. A San Francisco paper of recent date says that the reports received from the various parts of the State all tell of diminished acreage in wheat and barley, of improved yield where land has been sown, and of an immense fruit crop. Hay will be heavy; grain light. Colusa will have about half her usual wheat acreage, but a better result from that; rust is feared. Los Angeles will have a full crop of all kinds of fruit. Corn will yield largely; wheat and barley will be short. Fresno will have 200,000 tons of grain off 200,000



acres, 750,000 to 800,000 boxes of raisins and a large fruit crop. Sonoma will have a good hay crop but a small grain yield. San Diego will have 15,000 tons of wheat and barley and 8,000 tons of hay. Tulare will have 4,500,000 centals of wheat. It is said that the wheat crop of San Joaquin county will be only half the average, 150,000 acres. Napa has an excellent outlook, except for grain. Alameda will have a diminished grain crop. Butte will have a fair grain crop, but not on adobe lands. Stanislaus prospects are good, with half the wheat acreage; more than last year's yield is looked for. There will be large grain and fruit crops in Owen valley, Inyo county. Grain is backward in Nevada county. In Ventura 30,000 acres will be planted to beans; the barley crop will be the largest ever known. Yuba and Sutter counties will have about half the usual grain crops, but hay will give a heavy yield. San Benito will have good grain crops and large fruit crops, except in apricots. Sacramento county will have from one-half to two-thirds its usual wheat crop. Kern will have banner crops of hay, grain and fruits. San Luis Obispo will, compared with 1889, have 85 per cent. wheat, 66 per cent. barley and 90 per cent. hay crop. San Mateo will have a three-quarter crop of grain. Merced will probably have the largest grain crops on record. San Bernardino will have half crops of grain and hay. Yolo will have a small grain, but a large hay crop. The Solano wheat and barley crops are a failure. Hay will be good. Placer will have a very heavy crop and a fair fruit crop. Tehama will have a three-fourths crop of hay and grain. In Shasta hay, grain and fruit will be better than in many years. Monterey will have a short grain crop, but a large yield of hay.

#### MILLING PATENTS.

Among the patents granted April 22, 1890, are the following:

Daniel T. Denton, Tower, Minn., No. 425,994, a counter-balance for chutes, containing the combination, with the horizontal shaft, the two pulleys thereon, the pivoted chute, its chain wound on one of said pulleys, the receptacle, and its chain wound in an opposite direction on the other pulley, of the supply-pipe parallel with the said shaft, its cock arranged to discharge into the receptacle, the cock on the receptacle, and a trip to open said cock as the receptacle descends.

Hiram N. J. Mansfield, Malone, N. Y., No. 426,192, a machine for grinding mill-rollers, containing the combination, with brackets adapted to be connected detachably to a roller-frame, of vertical beams or supports adapted to be mounted in said brackets and having vertical slots formed therein, the boxes arranged to slide vertically upon said beams or supports, said boxes carrying the grinding mechanism and provided with transverse stud-bolts extending through the slots in the vertical beams or supports and having interiorly-screw-threaded eyes, the vertical screw-threaded shafts extending through the beams or supports, engaging the screw-threaded eyes in the stud-bolts of the vertically-adjustable boxes, and having bearings in brackets or standards extending upwardly from the upper supporting-brackets, worm-wheels mounted loosely upon the said screws, a transverse shaft having worms meshing with the said worm-wheels, mechanism for operating the said shaft, and means for connecting the said worm-wheels rigidly with the screws, upon which they are respectively mounted.

FOLLOWING is a Toledo, O., crop report dated April 18: During the last four days C. A. King and Co. have received over 4,000 reports, covering every important wheat county in Ohio, Indiana, Illinois, Michigan, Kansas and Missouri. The report shows that the prospects for winter wheat in the States named were very favorable until last month, except in Michigan. Michigan suffered last fall, while damage in the other States was done mostly by the freezing in March. Kansas complains some of damage by winds. Michigan shows some improvement over two weeks ago, when the Department of Agriculture returns for April were gathered. Ohio and Missouri have improved some and Kansas a trifle.

Indiana and Illinois show no material change, some sections becoming decidedly worse and others, which were good, becoming better. All of the States promise worse than a year ago. Indiana and Illinois are much worse, Missouri somewhat worse, Michigan worse, Kansas a trifle worse, but Ohio nearly as good, being only fair last year. The reports show that about one-fifth of the last crop remains in the farmers' hands, mills and elevators. It will be about three months before the new crop will be available. Michigan and Ohio have the most, as is generally the case. Kansas, Missouri and Illinois have very little. Indiana has about 15 per cent.

A PHILADELPHIA firm claims to be in possession of a patent which antedates by several years any in the possession of the Consolidated Roller Mill Company, and they broadly claim combinations used by most of the rolls now on the market. The claim is represented as covering the combinations of a fixed roll, an adjustable roll carried upon a swing-arm, and screw and spring devices for adjusting the same. The invention is said to have been designed as a feed-mill, but it was not pushed before the public. It is said this firm intend to push their claim. More money for lawyers!

#### THE MILL CAT SOLILOQUIZES.

I'm only a cat, but, I vum and swow,  
I could give the old miller points on how  
This dinged old flour-mill had order be run  
In order to make both money and fun!  
The very first thing, I'd take that fresh "cub,"  
His nose with the roughest of rasps I'd rub,  
And his head I'd dip in a sour swill-pail,  
Till he could walk without smashing my tail!  
O! I hate that "cub"! For he makes me so tired!  
This mill will never succeed till he's fired!  
Then there are the agents who come about,—  
The old man had just order fire 'em right out!  
They hang around, and they talk, and they yarn,  
And sell him machines that a'n't wuth a darn,  
And give him cigars that smell like burnt hair,  
And drive me out in the cold winter air!  
I'm ready to wager the next rat I kill,  
That "cub" and these agents will ruin this mill!

#### CATARRH.

##### CATARRHAL DEAFNESS—HAY FEVER.

##### A NEW HOME TREATMENT.

Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research, however, has proved this to be a fact, and the result of this discovery is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks.

N. B.—This treatment is not a snuff or an ointment; both have been discarded by reputable physicians as injurious. A pamphlet explaining this new treatment is sent free on receipt of stamp to pay postage, by A. H. Dixon & Son, 337 and 339 West King street, Toronto, Canada.—*Christian Advocate.*

Sufferers from Catarrhal troubles should carefully read the above.

#### SPECIAL NOTICES.

##### BOLTING CLOTH.

Do not order your cloth until you have conferred with us. It will pay you, both in point of quality and price. We are prepared with special facilities for this work. Write us before you order.

CASE MANUFACTURING CO..

Columbus, Ohio.

Office and Factory, 5th Street, north of Naughten.

#### TOLEDO MILL PICKS AND STONE TOOL MFG. CO.

Manufacturer

and Dresser of

#### MILL PICKS.

Made of the best double-refined English cast steel. All work guaranteed. For terms and warranty, address, GEO. W. HEARTLEY, No. 297 St. Clair Street, Toledo, Ohio. Send for Circular.

N. B.—All Mill Picks ground and ready for use (both old and new) before leaving the shop. No time and money lost grinding rough and newly dressed Picks. All come to hand ready for use.

ALSO MANUFACTURERS OF

Shafting, Pulleys, Hangers, Coupling, Machine and Jobbing, Etc., Etc.



## Practical Notes

**AN ELECTRIC TRAIN-BRAKE.**—A new electric train-brake works upon the inside face of the wheels, or rather upon an iron disc fitted to it. The disc or annular ring is a large plate of iron of considerable thickness and several inches in depth, and is securely bolted to the inner side of the wheel. Opposite this ring is another, which encircles the axle loosely and is fixed by stays in such a manner that it can not revolve with the wheel, but can be moved laterally so as to come into contact with or recede from the ring attached to the wheel. It is attached to powerful magnetic coils and constitutes a large electro-magnet. When the electric current is applied to it, it is powerfully attracted to the plate on the wheel, with the effect of arresting its revolution and so acting as a brake.

## GENERAL NOTES.

As a remarkable instance of rapid national debt liquidation, this country stands pre-eminent. Only a few years ago we paid in interest nearly as much as Great Britain; today we have to pay only \$35,000,000, against Great Britain's \$130,000,000; France's \$258,000,000; Austro-Hungary's \$126,000,000; Italy's \$100,000,000; Russia's \$220,000,000, and Spain's \$56,000,000, while of the German states Prussia alone pays \$44,000,000. Even the Dominion of Canada pays \$10,000,000 a year, or nearly one-third as much as the United States, while the Dominion's population is only one-twelfth of that of this Republic.

### COTEMPORARY COMMENT.

It has become the habit of late to talk about the duty that railroads owe to the farmers, just as though railroads were built expressly and solely for the purpose of serving farmers in getting their products to market. The first duty of a great corporation would seem to be to its stockholders, to the end that reasonable and fair dividends might be earned and divided among them. Railroad companies, like all other business corporations, must first be prosperous themselves before they can be beneficial to the communities in which they exist.—*Kansas City "Modern Miller."*

Business is rushing. We exported two bushels of flaxseed during February, against none for February, 1889.—*Chicago "American Elevator."*

The country has entered upon the second quarter of the year with great hopefulness, inspired by the larger volume of currency in circulation, larger tonnage in motion, amount of imports and exports, and the larger production in agriculture, iron, steel and other interests. Trade seems to be gradually improving throughout the country, spite of the unfavorable symptoms which seem to grow more distinct, supplemented by several failures, accompanied by features which have had the effect of disturbing confidence.—*Chicago "Industrial World."*

The government have decided to abolish the rebate on corn imported into this country, manufactured into whiskey here, and re-exported. Our export of whiskey is under 10,000 gallons, and as much of this is made from Canadian grain the rebate, all told, rarely exceeds \$100.—*Montreal "Journal of Commerce."*

The Consolidated Roller Mill Company has found it necessary to make the announcement that they are not yet out of wind and will soon be up and try again. Perseverance may be a virtue, but in this case we deplore their judgment.—*Enterprise, Kan., "Miller."*

By its action in imposing duties on agricultural produce, the Canadian Government is beyond doubt inviting retaliation at Washington. It will scarcely do to plead that the Americans threw the first stone. True, a committee of eight had reported a tariff bill with a menacing agricultural

schedule, but that was the extent to which action on the tariff had proceeded in Congress. If we wanted to insure the passage of the McKinley bill, the best thing we could do would be to bring in a tariff bill of our own imposing heavy duties on American agriculture; and this is precisely what has been done.—*Toronto, Ontario, "Monetary Times."*

### MILLING IN TRANSIT.

The Central Traffic Association has stopped dallying with the milling in transit question and taken the following action:

"Whereas, In the opinion of the legal advisers of many of the railroads, milling in transit arrangements are not in conflict with the Inter-State Commerce law, and

"Whereas, Such arrangements afford the milling interests of the country that protection which, if withdrawn, may result in closing many mills in the territory of the Central Traffic Association; therefore, be it

"Resolved, That in the opinion of this committee, milling in transit arrangements should be continued on a minimum basis of 1¢. per 100 lbs. higher than the rates of grain from origin to destination."

### MR. SEAMANS ON THE SHARKS.

Following is an extract from the report of Secretary S. H. Seamans, of the Wisconsin Millers' Association, at the meeting of that body in Milwaukee on the 8th of April: "Again the patent sharks have commenced operations and we are threatened with suits from two sources. First.—One J. H. Thomas Russell, claiming title under the George T. Smith patents, has brought suit against Messrs. Kendall & Co., of Hartford, claiming royalty under the Smith patents. This looks to me like a fraud of the first water. It is being defended by Messrs. Kendall & Co., and the Secretary upon his own personal responsibility is giving the defendants all the aid and information possible. The probabilities are that this case, like all others, will meet the defeat it merits. Another case to which your attention has undoubtedly been called by numerous circulars, refers to the patents on cockle separators. One William E. Lee, of Minnesota, brought suit against Pillsbury & Co. for infringement of his patent. This suit was defended by the Milwaukee Cockle Separator Mfg. Co., and, much to the surprise of both the plaintiff's attorney and the defendant, a decision has been rendered in favor of the patentee. This case was tried before a jury, and the plea which seemed to carry great weight with the jury was the fact that the 'poor inventor' was being defrauded of his rights by the 'rich miller.' Now in this case the reverse is the fact. The owner of the patent is a rich banker, and the parties to be attacked are 'poor millers.' I have had a conference with the Cockle Separator Company, and they have agreed to see this case through to the United States Supreme Court, if necessary. From what little knowledge I have of patents and the milling art, I am thoroughly satisfied that the patents of Lee will be declared void in the higher court."

### THE "PLANSICHTER" IN BUDAPEST.

According to the testimony of the Budapest "Pester Lloyd," the Haggemacher "Plansichter" is a success. That journal has received from the Concordia Flour Mill, one of the great merchant mills for which the capital of Hungary is so famous, a very favorable report concerning the work of the "Plansichter," or horizontal scalper, lately patented by Mr. Carl Haggemacher. It should be premised that this mill has fitted an entire department with this machine, in consequence of the satisfactory results of the experiments to which the "Plansichter" was subjected by the technical advisers of the mill about a year and a half ago. The report sets forth that each "Plansichter," measuring three meters (the meter is, roughly, 3 ft. 3 in.) in length, and one meter in width, takes the place of at least four reels of a length of 3 meters a piece. The sifting process is more thoroughly effected than by the latter machines, while there is no need for any "finishing." The wear of the silk surface is said to be considerably diminished, and there is also a smaller consumption of power. It would, moreover, appear that the total yield is increased, while the color and general quality of the flour leave nothing to be desired.



**PREJUDICE** Investigate the merits of the Reliance Safety Water Columns. It pays to keep posted. Many of the largest corporations have found it profitable to discard the old appliances and adopt these safeguards. There is always economy in safety. Send for illustrated price-list.

Reliance Gauge Co., 831 Sheriff St., Cleveland, Ohio.

## THE "HARLOW" Positive Feed Lubricators.

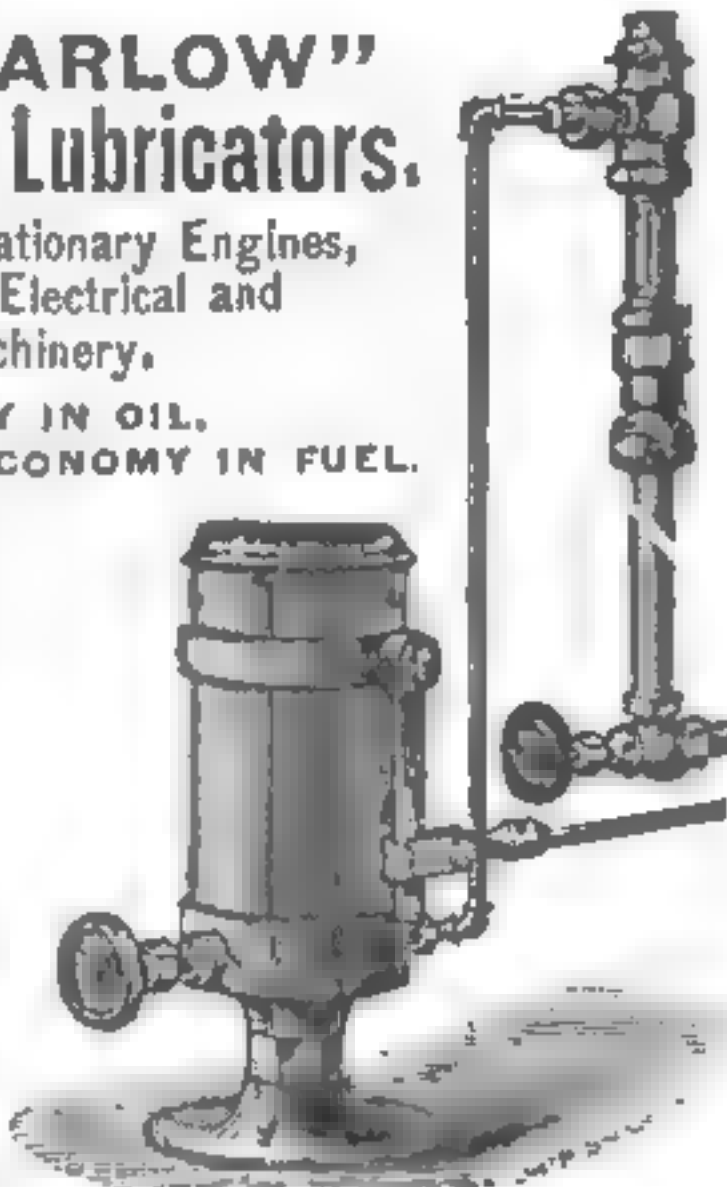
For Marine and Stationary Engines, Steam Pumps, Electrical and other Machinery.

MAXIMUM ECONOMY IN OIL.  
MARKED ECONOMY IN FUEL.

Not dependent upon or operated by Steam Pressure, Condensation or Gravity.  
Not affected by changes of temperature.

BEING operated by some moving portion of the engine or machine to be lubricated, the "Harlow Lubricator" starts and stops with the engine or machine being lubricated, without requiring the slightest attention from the engineer or operator, always delivering the oil in any amount from a drop to a constant stream.  
The cup can be filled at any moment while the engine or machine being lubricated is in operation, without causing any leakage either of oil or steam.

Harlow Lubricator Mfg. Co. BOSTON, Mass.  
U. S. A.



## PRACTICAL BOOKS FOR Practical Men

By ROBERT GRIMSHAW, M. E.

Steam Engine Catechism...complete..... \$2.00  
Boiler Catechism..... 2.00  
Pump Catechism..... 1.00

These Catechisms give plain, correct, practical answers to practical questions, such as would be asked candidates for positions, licenses, or admission to engineering societies. No high science; no mathematical gymnastics. Popular style. Up to date.

### AVOID IMITATIONS.

Engineer's Hourly Log Book..... \$ .50  
The most convenient form for recording coal consumption, horse power, etc., with a view to the greatest economy of fuel and oil.  
Preparing For Indication..... \$1.00  
Invaluable to every running engineer.  
Saw Filing..... \$ .75  
Very practical and up to date.  
Practical Training..... \$ .50  
A very common-sense book for everybody.  
Square Root Made Easy..... \$ .50  
Helps you to learn or remember how to take the square root of anything.  
Hints On House Building..... \$ .50  
Useful to every house owner or renter.

Sent post-paid to any address on receipt of price by

McFAUL & NOLAN,  
Drawer 208, Buffalo, N. Y.

## THE BEST AND CHEAPEST CORN AND COB CRUSHER

IN THE WORLD.

All wearing parts cast of a steel mixture. Notice difference in construction. Most area where most work is done, where all other crushers have least area where most work is done. Low priced machinery is not the cheapest, considering durability and efficiency. Sent on 80 days' trial when satisfactory reference is furnished.

Please Send for Circulars.

RIGHT-HAND RUNNER.

LEFT-HAND MILL.

DRIVEN FROM ABOVE.

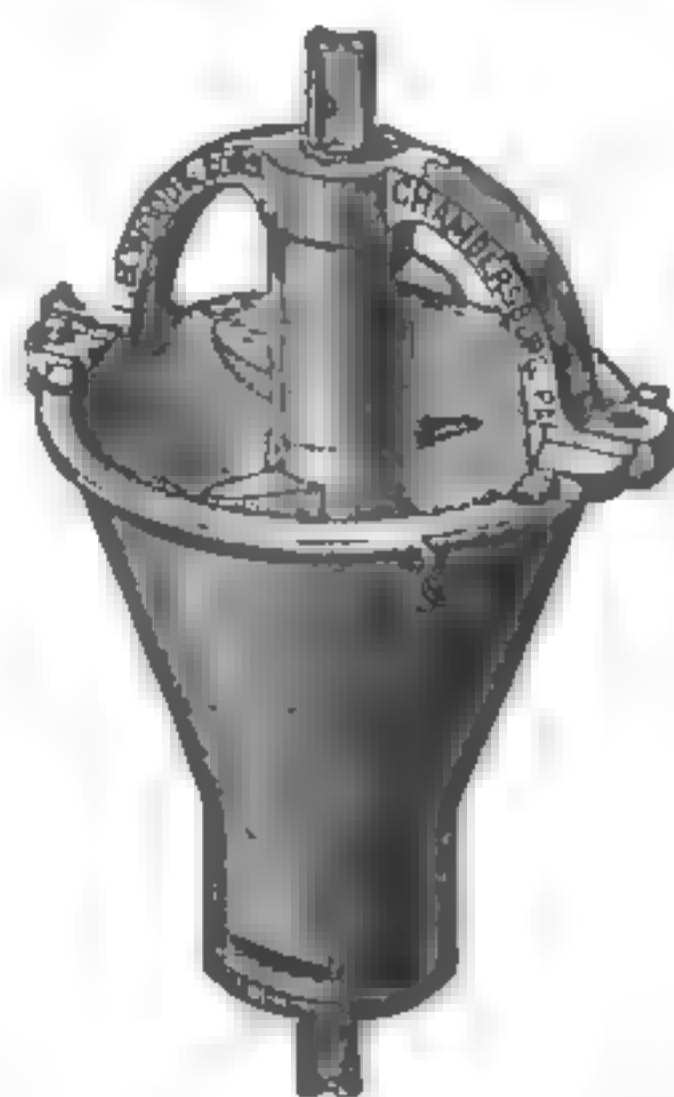


R. C. McCULLEY, LANCASTER, PENN.

\$15

## WILL BUY THE BEST AND CHEAPEST CORN & COB CRUSHER

IN THE WORLD.

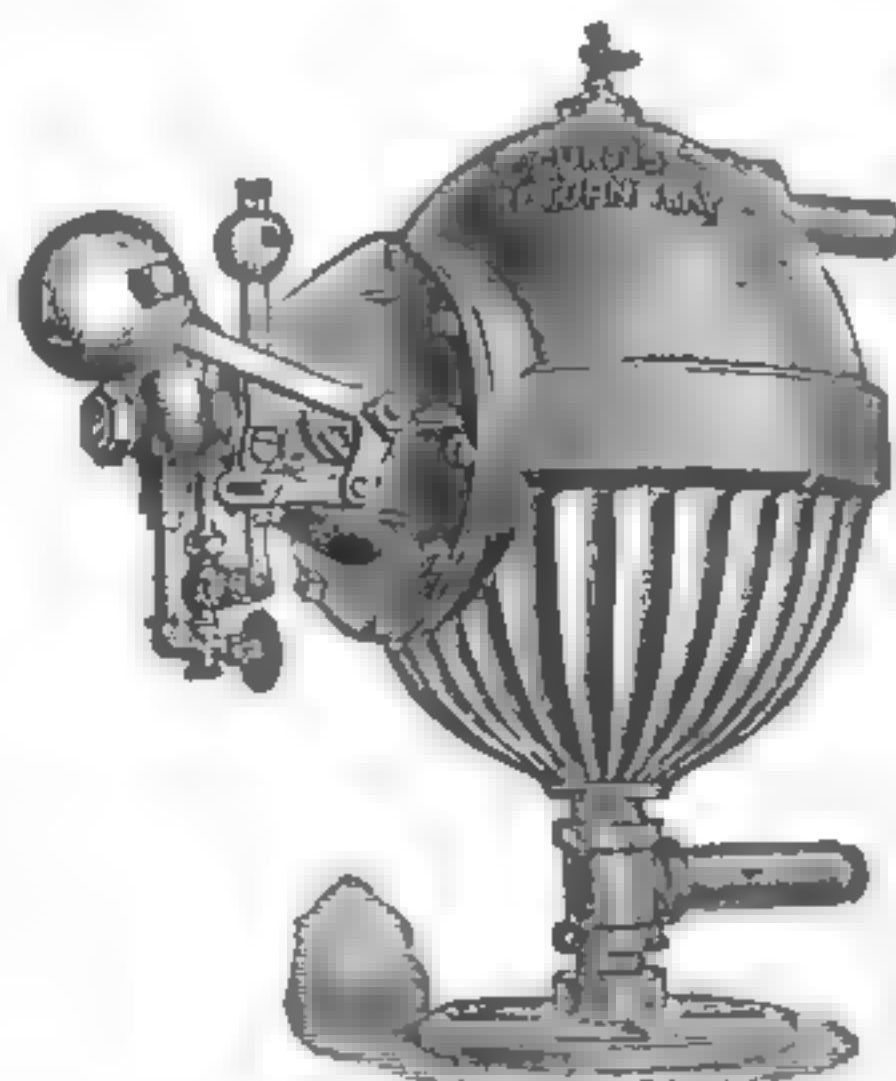


Our crushers are made of a "special quality" of material that insures years of service. Thousands of these crushers are in use throughout the United States and Canada. Send for circular, giving testimonials from millers who are using them, and know a good thing when they see it.

T. B. WOOD'S SONS, CHAMBERSBURG, PA.

Manufacturers of

Shafting, Pulleys, Hangers, Mill Gearing, Etc.



## THE CURTIS PATENT RETURN STEAM TRAP.

It is noiseless, positive, rapid, will return all condensation back into the boiler, and works equally well in connection with reduced pressure or exhaust steam, also when the return is below the water line of the boiler.

THE CURTIS REGULATOR COMPANY,  
No. 74 BEVERLY ST., BOSTON, MASS.

GENERAL AGENCIES.

New York, 109 Liberty st. Minneapolis, 210 S. Third st.  
Philadelphia, 2035 N. Front st. Chicago, 218 Lake st.

## The Canton Cabinet Filing Case Company, Canton, Ohio.

MANUFACTURERS OF

### The New Buckeye Document Case & Letter File; Also All Kinds Office Furniture

NO. 8 Represents one side of one of our Revolving Cabinet Letter Files and Document Cases Combined. It contains 80 Document Drawers and 8 Letter File Drawers. In filing letters we use first VOWEL of name on front of drawer, and LETTER FOLLOWING first VOWEL on Index Sheet within drawer. We also make more exhaustive systems which contain from 6 to 100 or more Filing Drawers.

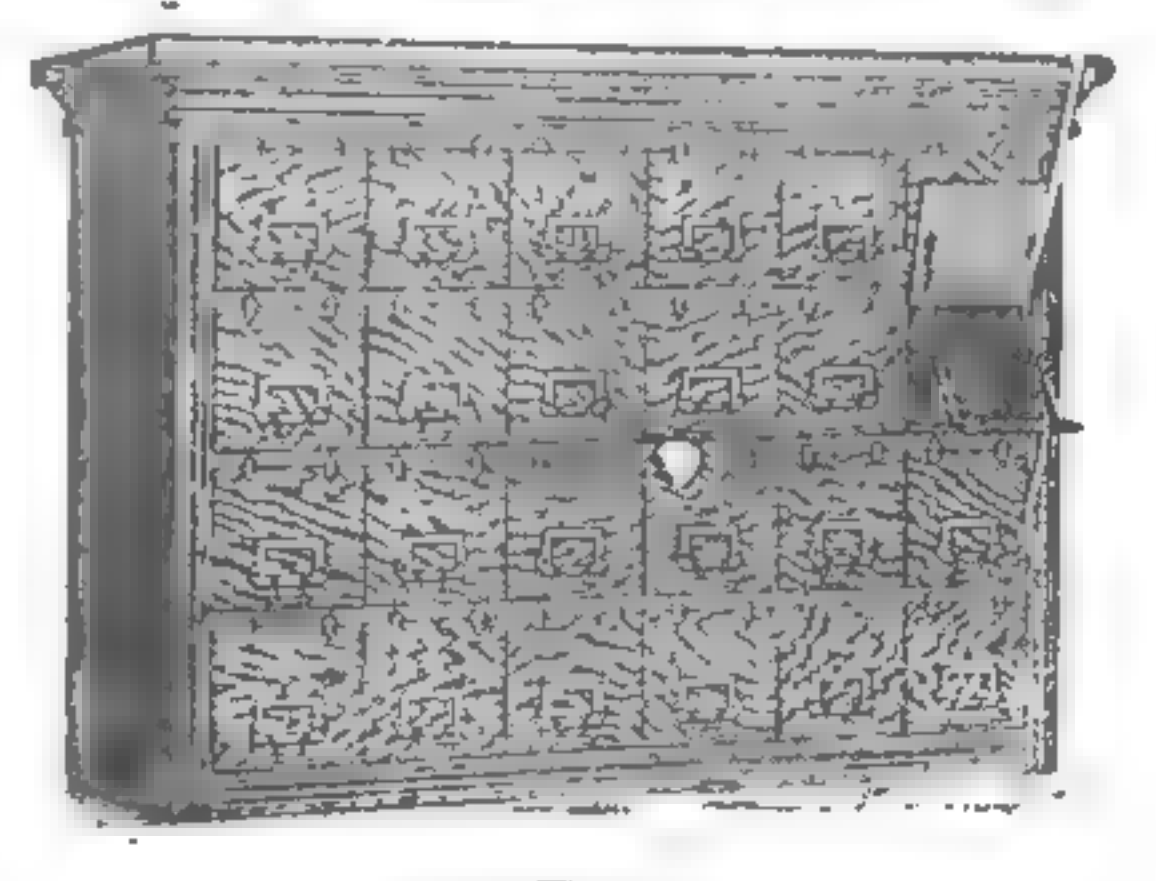
NO. 1 Represents one of our small Document Cabinets, for use on desks or brackets. Action of drawer can be seen in the cut. When front is raised inner drawer comes forward, exposing contents of drawer for inspection.

Our Cabinet Files are Conceded to be the Most Convenient of Any in the Market. They are Compact, Simple, Complete, Durable and Ornamental.

SEND FOR PRICE LIST AND CATALOGUE.



NO. 8.



NO. 1.





G. Castino, miller, Puente, Cal., attached.  
 Marcus, Ia., men will build a 50-barrel mill.  
 J. F. Nissen, Salem, N. C., builds a corn-mill.  
 E. Dasher's grist-mill, Savannah, Ga., burned.  
 Chester & Carr, millers, Antwerp, O., dissolved.  
 W. A. Falconer, Liberty, Va., remodels to rolls.  
 E. R. Dyeur, Phillippi, W. Va., plan a flour-mill.  
 D. Lake, flour-mill, Aberdeen, Miss., put in steam.  
 A. B. Copley, Georgetown, Md., enlarges his mill.  
 Rosenheimer's elevator, Kewaskum, Wis., burned.  
 W. W. Turner, Vance, N. C., projects a flour-mill.  
 E. Wheeler, St. Albans, W. Va., improves his mill.  
 The Bristol, Tenn., Milling Co. add new machinery.  
 P. V. Carbine, Madison, Ga., enlarges his grist-mill.  
 A. Hook, Capon Bridge, W. Va., remodeled his mill.  
 W. A. Rondabush, Grove Hill, Va., remodels his mill.  
 A. Leigh, Colvin Run, Va., built a flour and corn mill.  
 Folmar & Sons, Troy, Ala., want grist-mill machinery.  
 J. G. Siler, Franklin, N. C., wants grist-mill machinery.  
 John W. Shrewbrook's grist-mill, Holden, Mass., burned.  
 H. C. McNail, miller, Milton, N. H., moved to Shelburne.  
 J. Heacock, Millville, Pa., builds a 50-barrel flouring-mill.  
 H. D. Williams, Shelby, Miss., wants grist-mill machinery.  
 A. G. Pool, Vernon Hill, Va., builds a 60-barrel roller mill.  
 Flory Bros. & Reichard, Bangor, Pa., build a 60-barrel mill.  
 Wm. H. Decker, Narrowsburg, Pa., has built a flouring-mill.  
 C. W. Fisher & Son, Lowell, Pa., build a 30-barrel roller mill.  
 R. Soffens & Miller Bros., Lubeck, W. Va., build a flour-mill.  
 D. F. Billmeyer, Shepherdstown, W. Va., builds a roller-mill.  
 F. G. Foote, of Foote Bros. & Co., millers, Oshkosh, Wis., is dead.  
 C. R. Wilson, Sykesville, Md., remodels to rolls and wants an outfit.  
 I. S. Stover, Flemington Junction, N. J., built a 50-barrel roller-mill.  
 E. F. Friend, Marianna, Ark., wants a flour-mill outfit of machinery.  
 Jos. R. Phillips, of Price & Phillips, millers, Wilmington, Del., is dead.  
 H. Hawkins, Hawkinsville, Ala., wants machinery for a new grist-mill.  
 R. W. Gillespie, Pickens, S. C., builds a corn-mill; he wants machinery.  
 The Fossil Flouring Mills Co. is a newly incorporated firm in Fossil, Ore.  
 Tracy & Russell, grist-mill, Shelburne, Vt., succeeded by H. C. McNail.  
 Sampson, Ray & Co., West Newton, Pa., build 100-barrel flouring-mill.  
 H. & L. Cooper, Washingtonville, Pa., build 25-bbl. roller flouring-mill.  
 The Enochville Flouring Mill Co. is a new stock concern in Enochville, N. C.  
 W. L. Davis's elevator, Chelsea, Mass., burned; loss \$37,000; partly insured.  
 Carter, Leake & Co., Ashland, Va., project a flour-mill; machinery is wanted.  
 J. C. Beery & Co., Harrisonburg, Va., build a 150-barrel roller flouring-mill.  
 Heckert & Kelley, Valley, O., are building a 2-break 50-barrel flouring-mill.  
 Wm. S. Bunting, Darby, Pa., has leased his grist-mill to Marshall Brothers.  
 J. D. Hayes, Readyville, Tenn., wants machinery for a new flour and corn mill.  
 C. R. Baird, Elk Valley, Tenn., wants an outfit of machinery for a new grist-mill.  
 J. H. Knox & Co., Corsicana, Tex., will build a flour-mill; machinery is wanted.  
 K. Bushnell's grist-mill, Wright's Corners, near Lockport, N. Y., burned; loss \$2,000.

The Eagle Point Roller Mills Co. is a new concern incorporated at Eagle Point, Ore.

The Hamilton, Tex., Mill & Gin Co. will put in a roller flouring-mill equipment.

The Bellwood Flour Mill Co., Bellwood, Va., put in a 25-barrel roller flouring equipment.

The Vernon, Tex., Mill & Elevator Co. want machinery for a 50,000-bushel grain-elevator.

J. C. Loughrey, Sipe Springs, Tex., wants a machinery equipment for 100-barrel flouring-mill.

C. Gallagher & Son's Cairo City Flour Mills, Cairo, Ill., burned; loss \$25,000; insurance \$10,000.

Peterson & Johnson, Jamestown, N. Y., have bought the City Mills plant of Weeks & Johnson.

H. Lambeke & Co.'s flouring-mill and grain-elevator, Wilmington, O., burned; loss \$3,700; insurance \$2,150.

Manitoba farmers are using the press-drill largely in seeding wheat this year. They expect great results from its use.

B. D. Lee & Co., Belton, Tex., will either remove their flour-mill to Brownwood, or build a new mill in that town.

A. L. Mansfield and others, Dunlap, Tenn., organized a company to build a \$10,000 flouring-mill. Machinery is wanted.

A. M. Brown and others, Abilene, Tex., organized a \$20,000 stock company and bought the Pioneer Mills Co.'s milling plant.

Hugh L. Clifford, Derry, Pa., and others will build a \$50,000 flouring-mill in Greensburg, Pa., on the site of the old Baer mill.

J. C. Hale, I. B. Howard and F. T. Benjamin, Rome, N. Y., formed a partnership and are operating the City Steam Mills in that place.

An elevator owner of Chicago states that he purchased 100,000 bushels of wheat forty years ago at 36 cents, and sold it in Buffalo at 42 cents.

Wm. Staple's grain-elevator, Powhatan, Kan., burned; loss \$5,000; no insurance. This was the fourth elevator fire in that vicinity within a week.

Chase, Armstrong & Co., Rochester, N. Y., are renovating their Arcade Mills throughout, adding one story and putting in a new mahinery equipment.

F. M. Cockrell, of Dallas, Tex., will build a 40,000-bushel grain-elevator in Harrold, Tex., another of the same size in Iowa Park, Tex., and a third, of the same size at Quanah, Tex.

According to the new Customs Law for 1890, wheat imported into the Argentine Republic will pay a duty of \$1.65; fine biscuits or pastries with flour, 9 cents per kilo., and wheat or maize flour 4 cents per kilo.

A North Dakota farmer thinks he has discovered a way of raising wheat that will make 6 pounds on an acre raise 50 bushels. He tried it last year and got three times the yield his neighbors did, and this year he is going to put 200 acres in in the same way. His plan is to plant it something like corn and cultivate it through the summer.

Following are the officers of the Wisconsin Millers' Association elected at the Milwaukee meeting: President, E. J. Lachman, Neenah; secretary and treasurer, L. R. Hurd, of Milwaukee; member of executive committee of Millers' National Association, William Sanderson; executive committee of State Association, J. B. A. Kern and C. A. Manegold, of Milwaukee, and Gus. May, of Watertown.

If, as is expected, says the Amherstburg, Ontario, *Echo*, the American Government put a duty on vegetables, it will be ruinous to many Canadian farmers, more particularly those who live near Petite Cote, on the Canadian bank of the Detroit River. These people, to a great extent, rely upon the Detroit market for the sale of their radishes and other "garden sass," and it is not an unusual sight to see, in radish season, over 100 wagons waiting to catch the first ferries for Detroit.

#### BOOKS AND PAMPHLETS.

Address D. J. Greenleaf, No. 7 Washington avenue, Port Jervis, N. Y., for prices and information concerning his brilliant new song, "Reflections," for bass or contralto voice. This composition is commended highly by the famous Dr. Carl E. Martin, of New York, who sings it in concerts. It is the musical gem of the year. Don't fail to secure a copy.



THE BEST ARE THE CHEAPEST.

New York

MILLERS' FLOUR SACKS A SPECIALTY.

THE PATRONAGE of the MILLING TRADE is MOST RESPECTFULLY SOLICITED.

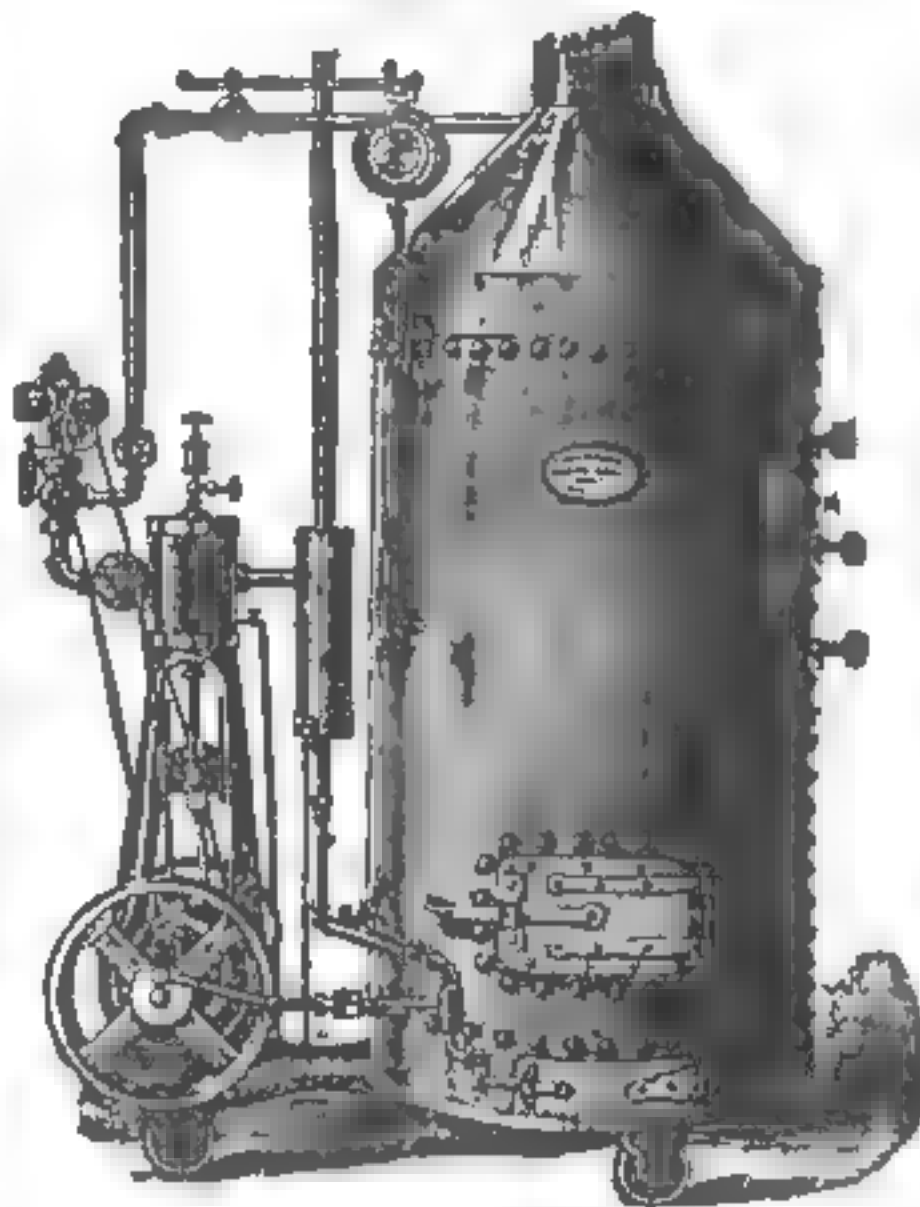




## TONAWANDA ENGINE AND BOILER WORKS

A Large Assortment of Machinery.

The Best 6-Horse Power Semi-Portable Upright Engine and Boiler Made.



SPECIAL PRICE. GUARANTEED.

SEND FOR CATALOGUE.  
**ARMITAGE, HERSCHELL & CO.**  
Tonawanda N. Y.

## "Cooper on Belting"

A Treatise on the Use of Belting for the Transmission of Power. With illustrations of approved and actual methods of arranging Main Driving and Quarter Twist Belts, and of Belt Fastenings. Examples and Rules in great number for exhibiting and calculating the size and driving power of belts. Plain, Particular and Practical Directions for the Treatment, Care and Management of Belts. Descriptions of many varieties of Beltings, together with chapters on the Transmission of Power by Ropes; by Iron and Wood Frictional Gearing; on the Strength of Belting Leather; and on the Experimental Investigations of Morin, Briggs, and others, for determining the Friction of Belts under different tensions, which are presented clearly and fully, with the text and tables unabridged. By JOHN H. COOPER, M. E. Second Edition. One vol., demy octavo. Cloth, \$3.50. Sent post-paid on receipt of price. Address,

**McFAUL & NOLAN, BUFFALO, N. Y.**

**L. L. WHITLOCK,**  
Advertising Agent  
FOR MANUFACTURERS.  
TRADE JOURNALS A SPECIALTY.  
P. O. DRAWER 5323. Boston, Mass.

As Agent for Advertisers instead of Papers, I obtain the Best Rates Possible for my Customers.

## CORNISH'S (OLD ESTABLISHED) ORGANS AND PIANOS!

THE ONLY FIRM OF MANUFACTURERS IN AMERICA selling direct to Consumer. From Factory to Family at Wholesale Rates on Terms to suit Purchaser.

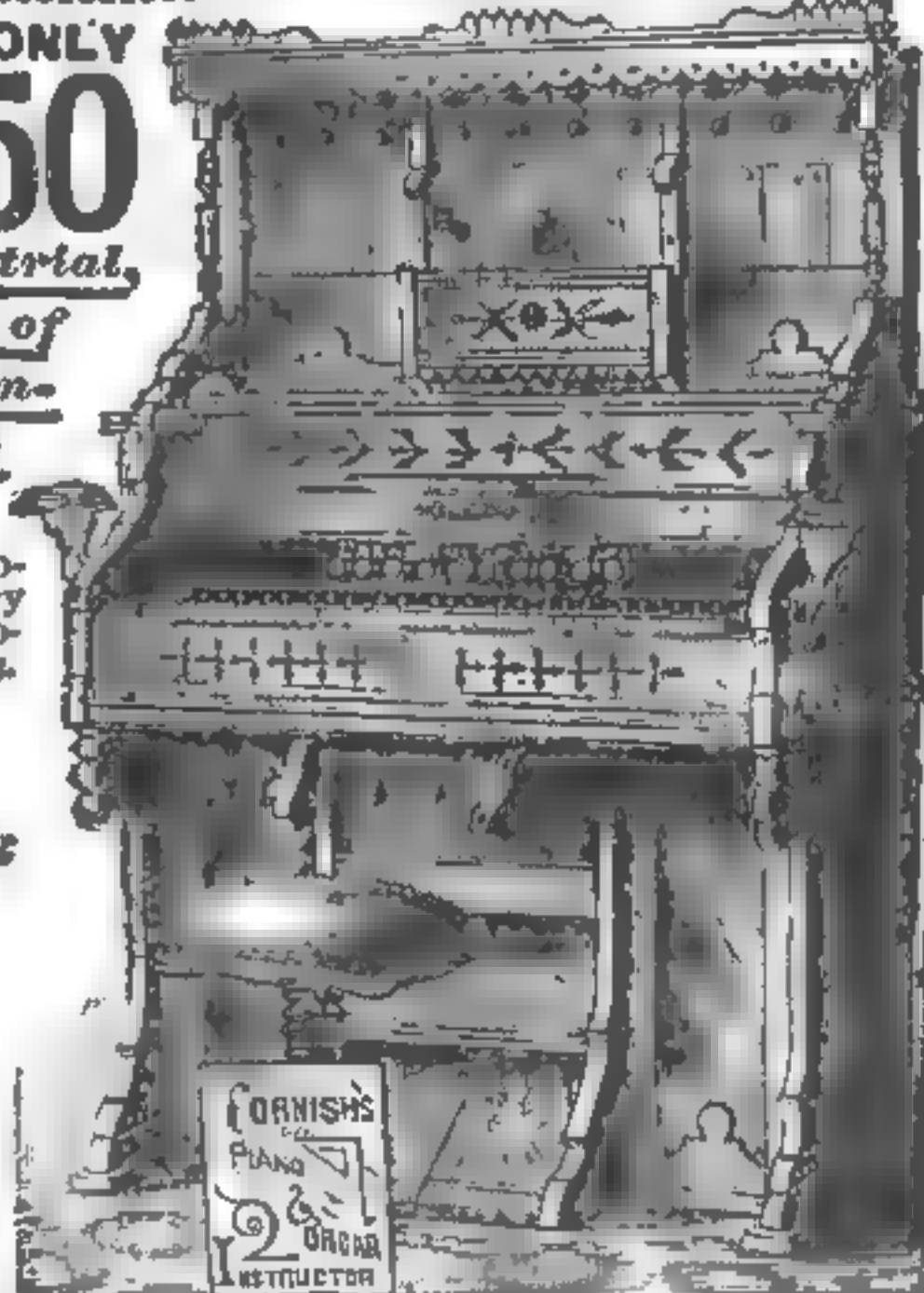
**\$75 ORGAN** { EXACTLY LIKE THIS CUT } **FOR ONLY \$50**  
**\$15.00 CASH** After ten days' trial, and the balance of price, \$35, to be paid in 7 monthly installments of \$5 each. OR IF CASH IS SENT WITH ORDER, WE WILL SPECIALLY ACCEPT \$45.00.

CORNISH'S Specially designed Cabinet Organ, Style "Canopietta," No. 10,000, contains 3 sets Orchestral toned Resonatory Pipe Quality Reeds; 5 Octaves; 10 Solo Stops; 2 Octave Couplers (Bass and Treble); 2 Knee Swells and all late improvements. Dimensions—65 in. high, 46 long, 21 wide.

WARRANTED FOR TEN LONG YEARS.

SOLID WALNUT CASE, HIGHLY FINISHED. Handsome Stool and large Instruction Book, making a Complete Musical Outfit.

**HOW TO ORDER.** Send a reference as to any Banker, Postmaster, Merchant or Express Ag't, and Organ will be shipped at once on Ten Days' Test Trial, and if not, after trial, satisfactory, you can return it and we will pay freight charges both ways. **YOU RUN NO RISK.**



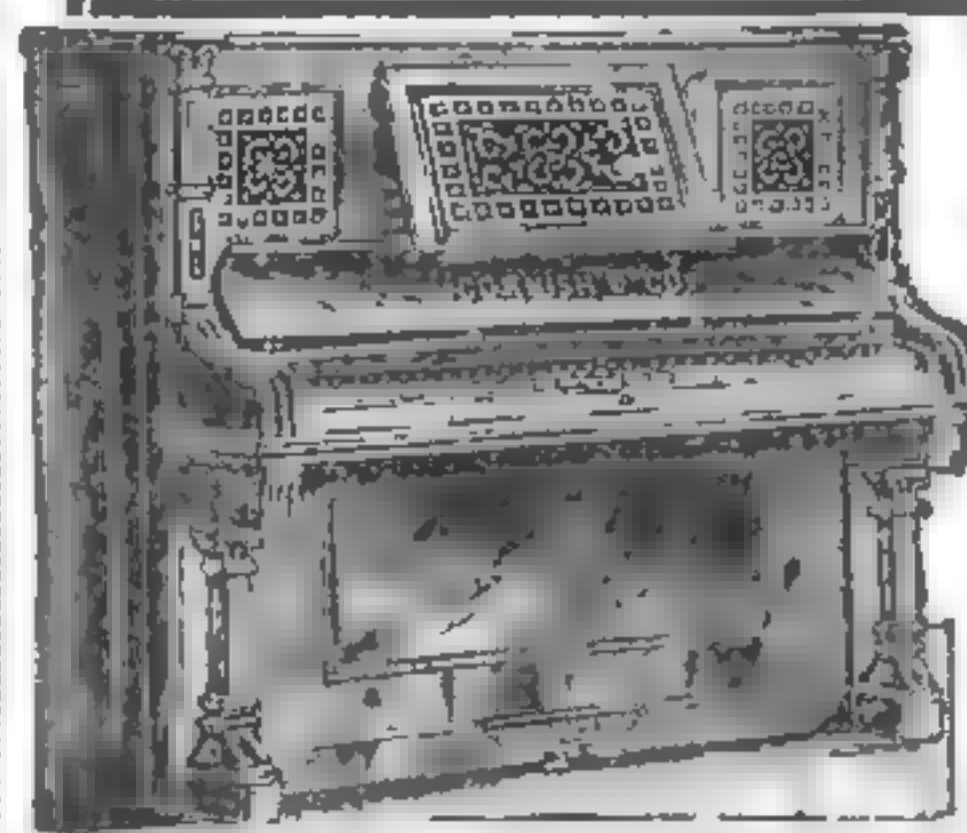
REFERENCES.—FIRST NATIONAL BANK, WASHINGTON, N. J., any Commercial Agency in the U. S., and thousands of persons who for the last 20 years have purchased instruments of our manufacture.

## CORNISH'S GRAND, SQUARE PIANOS AND UPRIGHT

Magnificent New Designs, finest materials, wholesale prices, upon terms to suit all purchasers. Shipped to any part of the civilized world, on free test trial.

**NO MONEY REQUIRED UNTIL YOU ARE SATISFIED.**

We want every reader of this paper to **WRITE TO-DAY** for our 20 pp. Illustrated Catalogue. **YOU CAN SAVE MONEY. WRITE** whether you want to buy now or not. Our Catalogue will interest you and you can get it for nothing.



Address **CORNISH & CO. (OLD ESTABLISHED) WASHINGTON, (AND RELIABLE,) NEW JERSEY.** (Mention paper.)



## WHEN YOU WANT WIRE CLOTH

SEND TO  
**Brooklyn Wire Cloth Works,**  
107 JOHN STREET, NEW YORK.

## LITTLE GIANT WATER WHEEL

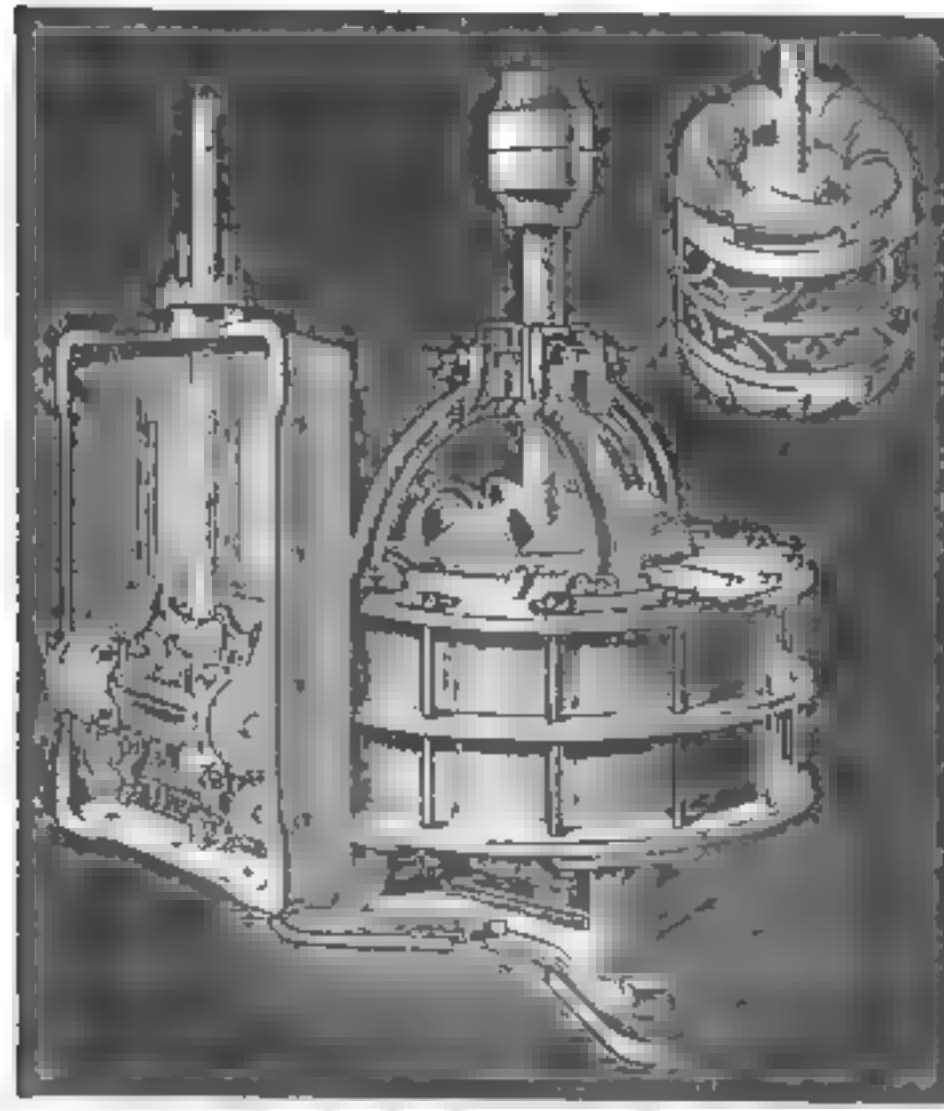
—MANUFACTURED BY—

## MUNSON BROS.

UTICA, - - N. Y.

Simple in Construction, Durable & Cheap.

**SEND FOR PRICES.**





## EUROPEAN ECHOES.

THE Association of German Millers will hold its 20th general meeting on the 6th, 7th, 8th and 9th of July next, at Hamburg.

THE Osnabrueck Mutual Millers' Insurance Society in the course of last year met 18 claims, at a cost of 22,615 marks 32 pf. or about \$5,750. In 14 cases lightning is made responsible for the loss, while there is one instance of spontaneous combustion in a coal store, and three cases in which the cause of the loss is returned as unknown.

THE flour-milling exhibition which it had been proposed to hold in Vienna next autumn, in conjunction with the agricultural and forestry exhibition, has been abandoned, as the committee of the agricultural exhibition did not see its way to allotting more than 400 square meters of ground for the milling exhibits, a space which was obviously insufficient.

AN Amsterdam letter of recent date says: "Millers are proof against all local offers, for the majority of them can not compete against the flow of American flour with which our market is glutted. One steamer alone, recently arrived, brought no less than 50,000 bags, and it is needless to say that this quantity is too much for a small country like ours to receive at one time."

AT present there is no uniform legislation throughout Germany bearing on Sunday labor, and in most parts of the empire factories are allowed to work on Sunday so long as church service is not thereby disturbed. A recent case is mentioned of a miller at Ebeleben, who was fined 10 marks, under a law passed in 1765 in Schwarzburg-Sonderhausen, for working on Sunday, although church time was over before his mill was started.

FOLLOWING are the lengths of time usually reckoned for sailing grain-laden vessels to reach London or Liverpool from the ports mentioned: From South Russian and Danubian ports 75 days; from Atlantic ports of America 30 days; from Egypt 45 days; from California 128 days; from Australia 105 days; from India 120 days; from Chili 95 days, and from New Zealand 95 days. Steamers are allowed 21 days from the Black Sea, 21 days from Galatz and Ibrail, 20 days from Sulina, 22 days from Azof and 45 days from India.

A UNION of German operative millers has now been in existence for some eight months, and is said to possess several thousand members. Like most associations of this kind, it is composed of local branches. Its professed object is to secure a maximum working day of 12 hours, a minimum weekly wage of 18 marks, about \$4.37, and the complete abolition of Sunday labor. The leaders of the movement inaugurated by this union disclaim any idea of hostility to the employers as a body, and are apparently disposed to rely more on "moral suasion" than on the rough arbitrament of a strike. But, of course, it is impossible to say what may happen whenever the union may count a still larger proportion of the operative millers of Germany.

SAYS the London "Miller" of April 7: The wheat crop is made as much by light as by heat, and March, after its first arctic week, has been both warm and bright. At some stations the mean of sunshine for 25 days out of the 31 has been one hour in excess, and thus growing vegetation has been benefited by actinic rays, from which we may expect good after-results at the time of harvest. Perhaps, however, March must be debited as too rainy a month for the strong wheat-growing lands, and certainly vegetation has not been forced forward as it would have been had the soil been as genial as the weather. The severe frost of the early days of March was followed by heavy rain, just when the land was very cold, and thus a seed-bed was formed of half-frozen water, from which subsequent warmth has not yet repaired the injury done, and much barley sowing has had to be de-

layed in consequence. The hardy wheat plant is yet regarded as in good plight, and, generally, present harvest prospects in Europe, in England, France, Russia and parts of Germany are considered good. Certainly they are good enough to favor buyers at market over sellers. They furnish some fair excuse for millers to reduce their stocks to the lowest possible limit. Nevertheless, "prospects" are not "results," and should there be adverse weather spells in the future, the denudation of stocks may prove serious. London has less wheat in store than for many years past, and there are easy possibilities in the future for important fluctuations. At present buyers act in a high-handed manner, and wheat sellers, charm they ever so wisely, do not readily obtain customers. If stocks are very low, the quantity of wheat and flour on passage is considerable, and decidedly in excess of the bulk afloat at this date last season. But it is made up chiefly of Californian and Australian shipments, many of which usually get diverted from our own ports. From India the spring shipments are not likely to be much increased from their present moderate quantity, and sellers ask 33s. to 35s. 6d. per quarter for the sorts of wheat that commanded similar rates many weeks ago. In Indian and Russian wheat the prices current have ruled very even for several weeks past. It is now estimated that on April 1, 1890, wheat stocks are about 670,000 quarters, comparing with April 1, 1889, 1,352,000 quarters, and if flour stocks are included (these being in excess of usual quantity), still the total stocks of wheat and flour are together about half-a-million quarters less than those held a year ago. It may also be argued, from the comparative dryness of the season since harvest, that farmers have been able to thresh out and market a larger proportion of their wheat than in ordinary seasons, and thus can only possess smaller reserves than usual at this date.

IT is reported from St. Petersburg that the bakers, having raised their prices, were suddenly confronted with an order from the chief of the police by which they were compelled to "come down" to their former prices of 2, 2½ and 3 copecks per pound of bread. At the same time orders were issued for the daily inspection of bakers' shops, lest the loaves should suffer any diminution in size, weight or quality. But it is said that some bakers, desirous of saving the legs of the police, have managed to induce the inspectors to keep their visits and to make their reports from samples forwarded to the police stations. It would be interesting to know whether the samples sent out exactly correspond with what figures on the counter, and whether by any chance "metallic roubles," as the silver coin of the Czar is termed, ever stray into the dough from which the sample loaves are prepared.

### DECREASED SPRING WHEAT ACREAGE.

Wisconsin reports a small decrease in spring wheat acreage this year. The two Dakotas also report a decreased acreage. One explanation of the probable decreased wheat acreage in the Dakotas may be found in the fact that the State is requiring rent for the school section (one section in every eighteen), whereas heretofore the land has been rent free by squatters.

### A NEW METHOD OF TREATING DISEASE.

#### HOSPITAL REMEDIES.

What are they? There is a new departure in the treatment of disease. It consists in the collection of the specifics used by noted specialists of Europe and America, and bringing them within the reach of all. For instance the treatment pursued by special physicians who treat indigestion, stomach and liver troubles only, was obtained and prepared. The treatment of other physicians, celebrated for curing catarrh was procured, and so on till these incomparable cures now include disease of the lungs, kidneys, female weakness, rheumatism and nervous debility.

This new method of "one remedy for one disease" must appeal to the common sense of all sufferers, many of whom have experienced the ill effects, and thoroughly realize the absurdity of the claims of Patent Medicines which are guaranteed to cure every ill out of a single bottle, and the use of which, as statistics prove, has ruined more stomachs than alcohol. A circular describing these new remedies is sent free on receipt of stamp to pay postage by Hospital Remedy Company, Toronto, Canada, sole proprietors.



**COMPOUND** Condensing or Non-Condensing.  
16 SIZES, 5 to 500 H. P.  
Not yet equaled by any form of Engine for  
**HIGH FUEL DUTY AND SIMPLICITY.**

**STANDARD** 13 Sizes in Stock.  
5 to 250 H. P.  
3000 in use in all parts of the Civilized World.

**JUNIOR** 6 Sizes in Stock,  
5 to 50 H. P.  
An Automatic Engine cheaper than a Slide Valve.  
WELL BUILT. ECONOMICAL. RELIABLE.  
Over 300 Sold the First Year.

All the above built strictly to Gauge with  
INTERCHANGEABLE PARTS.  
REPAIRS CARRIED IN STOCK.  
SEND FOR ILLUSTRATED CATALOGUES.

**WESTINGHOUSE  
ENGINES**  
The Westinghouse Machine Co.  
PITTSBURGH, PA. U.S.A.

**SELLING DEPARTMENT IN THE UNITED STATES.**

New York,	17 Cortlandt St.	} Westinghouse, Church, Kerr & Co.
Boston,	Hathaway Building,	
Pittsburgh,	Westinghouse Build'g,	
Chicago,	156, 158 Lake St.	
Philadelphia,	608 Chestnut St.	M. R. Muckle, Jr. & Co.

**ST. LOUIS,**  
511 NORTH FOURTH ST.,  
Westinghouse, Church, Kerr & Co.

Salt Lake City,	259 S. Main St.	} Utah & Montana Machinery Co.
Butte, Mont.	Granite St.	
San Francisco,	21, 23 Fremont Street,	} Parke & Lacy Co.
Portland, Or.	33, 35 N. Front St.	
Charlotte, N. C.	36 College St.	} The D. A. Tompkins Co.
Atlanta, Ga.	45 S. Prior St.	
Dallas, Tex.		} Keating Imp. & Machine Co. G. E. James & Co.
Chattanooga, Tenn.,		



# CAMERON STEAM PUMP

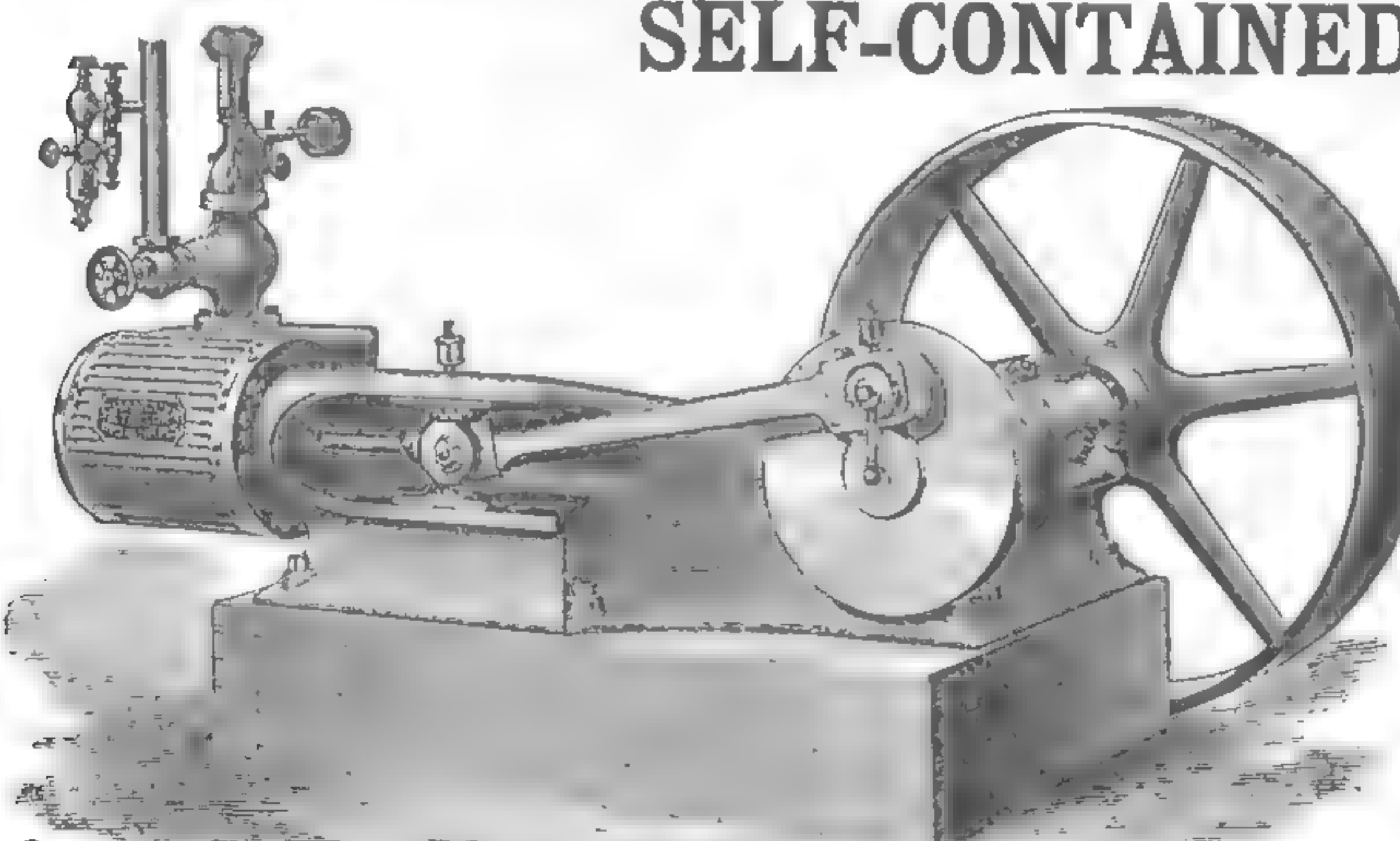
THE STANDARD OF EXCELLENCE.  
SIMPLE! COMPACT! DURABLE!  
"NO OUTSIDE VALVE GEAR."

## Steam, Air & Vacuum Pumps in Every Variety

FOR ILLUSTRATED CATALOGUE ADDRESS

# THE A.S. CAMERON STEAM PUMP WORKS

Foot of East 23d Street, New York.



## SELF-CONTAINED STEAM ENGINES

### Stationary or Semi-Portable.

High Standard Maintained.  
Prices Greatly Reduced.

WRITE FOR NEW ILLUSTRATED CATALOGUE NO. 32.

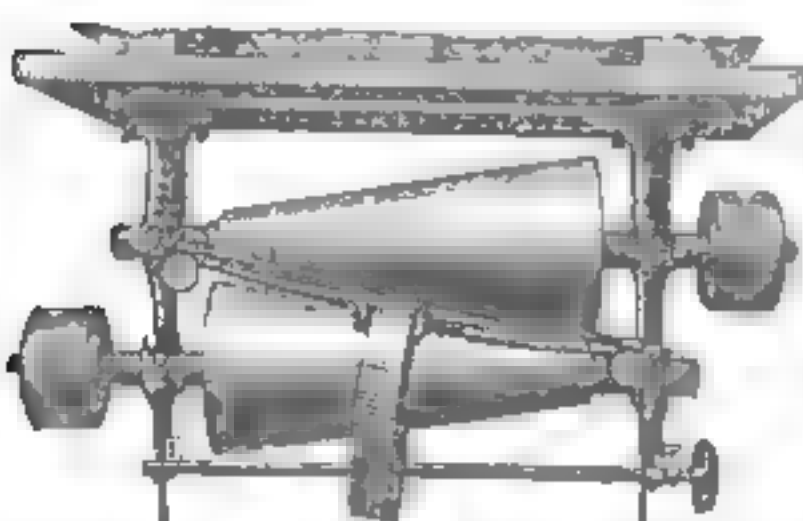
## Chandler & Taylor Co.,

### Indianapolis, Ind.

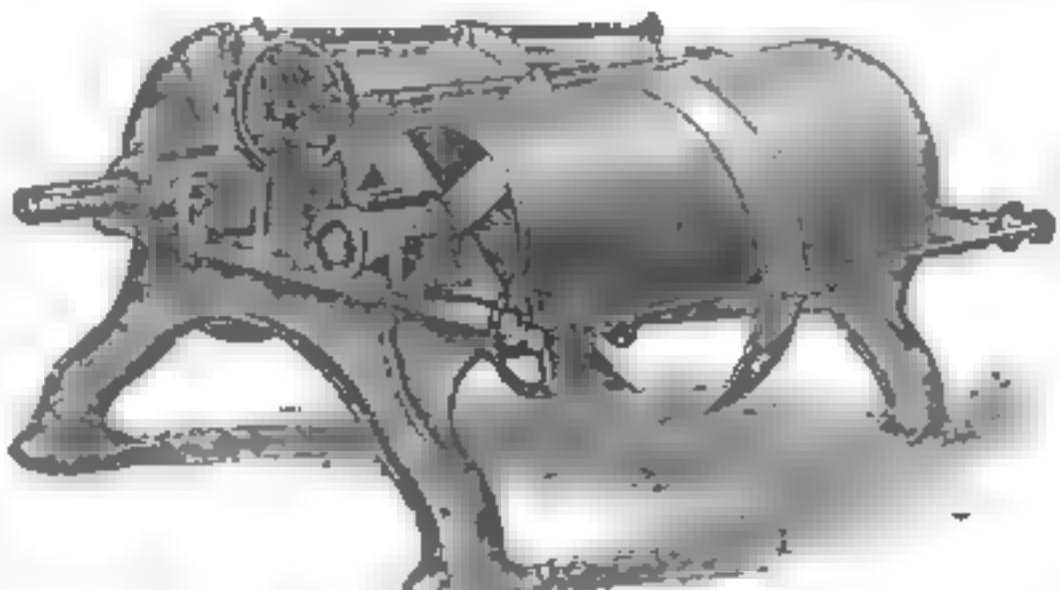
Engines, Saw-Mills and Drain Tile Machinery a Specialty.

## THE EVANS FRICTION CONE & FRICTIONAL GEARING

**"PATENTED."**



This cut represents a set of hanging cone pulleys. This pattern is intended for that class of machinery that stops and starts at the same speed, and at the same time be able to change the speed more or less while running. These cones are also fitted with a governor where a steady motion is required and the initial power is fluctuating. All sizes made from 1/2 Horse Power to 50 Horse Power.



SEND FOR ILLUSTRATED CATALOGUE.

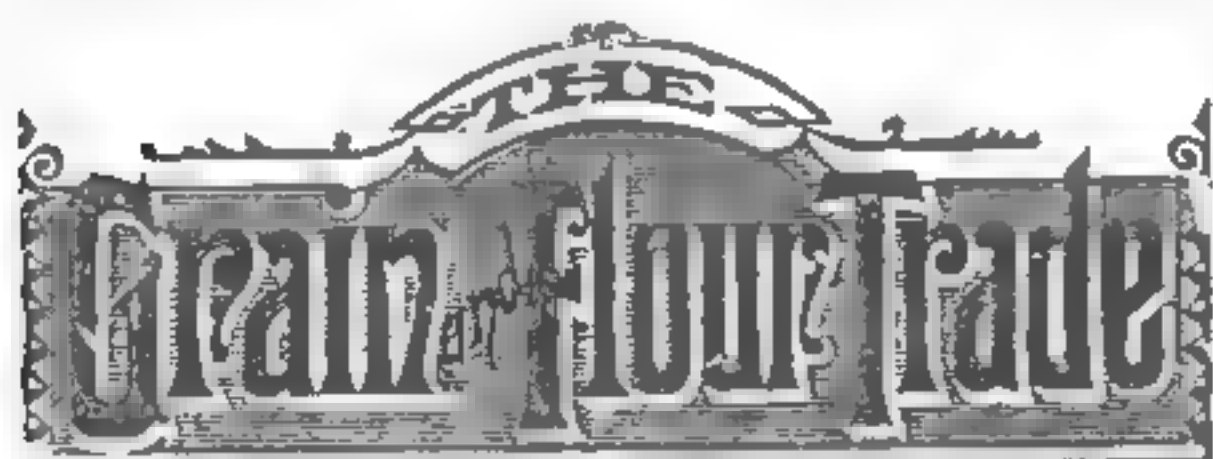
## EVANS FRICTION CONE CO., 85 Water St., BOSTON.

**SHIPPERS CAN SAVE TIME AND TROUBLE BY USING BARLOW'S SHIPING BLANKS.**

SEND FOR SAMPLE SHEET OF PRICES

BARLOW BROS. GRAND RAPIDS, MICH.





OFFICE OF THE MILLING WORLD,  
BUFFALO, N. Y., April 26, 1890.

Friday of last week was a day of dull, strong and excited wheat markets. April wheat closed at 95½c., with Atlantic port receipts 59,628, exports 103,391, and options 4,240,000 bushels. April corn closed at 40¾c., with receipts 321,384, exports 1,034,867, and options 600,000 bushels. April oats closed at 32¼c., with receipts 165,897, exports 10,803, and options 360,000 bushels. Wheat flour was held strongly on all grades except low grades below \$2.25, which are plenty, and which, the holders fear, will not keep well in warmer weather. Receipts were 6,672 sacks and 26,277 barrels, and exports 13,170 sacks and 44,019 barrels. The minor lines were strong and unchanged.

Saturday brought more bad crop reports on wheat, lighter offerings and stronger markets generally. April wheat closed at 96½c., with receipts 28,385, exports 44,814, and options 3,776,000 bushels. April corn closed at 41¾c., with receipts 357,967, exports 317,439, and options 264,000 bushels. April oats closed at 33c., with receipts 71,649, exports 39,486, and options 250,000 bushels. Wheat flour was stronger and, in some cases, higher, and at full top prices all around with wheat. Receipts were 10,576 sacks and 29,349 barrels, and exports 9,441 sacks and 21,842 barrels. The minor lines were featureless.

Monday brought better crop and weather reports and fairly active, but irregular, markets, on reduced stocks. April wheat closed at 96½c., with receipts 90,443, exports 203,737, and options 4,760,000 bushels. April corn closed at 42c., with receipts 240,939, exports 524,306, and options 2,000,000 bushels. The strength in corn was due to the heavy reduction of stocks. April oats closed at 34c., with receipts 290,439, exports 31,713, and options 1,000,000 bushels. Offerings and receipts were small. Wheat flour was very firmly held at top prices, and buyers had to pay full limits to obtain stocks. Receipts included 12,310 sacks and 28,837 barrels, and exports 1,297 sacks and 12,920 barrels. Of course the high prices checked export business. The minor lines were featureless and unchanged. The visible supply in the United States and Canada was:

	1890. April 19.	1889. April 20.	1888. April 21.
Wheat.....	24,593,272	26,989,678	32,633,418
Corn.....	17,855,506	14,914,963	8,188,223
Oats.....	3,820,624	6,769,297	3,373,095
Rye.....	1,046,488	1,464,850	344,440
Barley.....	911,290	939,460	1,090,166

Tuesday saw wheat climbing steadily towards the "dollar notch" in new York, on small seaboard supplies, buying by St. Louis, bulling by Old Hutch of Chicago, and worse crop reports. The speculators were uncertain whether Old Hutch was working to corner the May or the June wheat, as his purchases and sales were so made as to confuse them. April wheat closed at 97c., against 82¾c. a year ago. Receipts were 80,234, exports 52,701, and options 3,800,000 bushels. April corn closed at 42½c., with receipts 333,767, exports 272,926, and options 728,000 bushels. April oats closed at 33½c., with receipts 168,670, exports 57,996, and options 250,000 bushels. Wheat flour was very firmly held, with buyers holding off and resisting the advance to the utmost. When they bought, they were forced to pay the full advance, and their purchases were confined to necessities. Receipts included 10,174 sacks and 31,201 barrels, and exports 32,236 sacks and 9,564 barrels. British cables on flour were better on some brands, but generally the European limits were below the New York figures. The minor lines were generally firm. The bears talked confidently of a "smash" in wheat, but in private

they confessed that they had no idea of what the future move in wheat and flour will be. The bulls proclaimed that the situation meant permanent improvement in values.

The following shows the amount of wheat and flour together with the amount of corn on passage to United Kingdom, for ports of call or direct ports for the weeks mentioned:

	1890. April 22.	1889. April 23.
Wheat and flour, qrs....	2,620,000	1,858,000
Corn, qrs.....	711,000	262,000

The following shows the amount of wheat and corn on passage to the Continent for the past week and for the same week last year:

	1890. April 22.	1889. April 23.
Wheat, qrs.....	670,000	322,000
Corn, qrs.....	527,000	156,000

	Qrs.
Shipments India wheat to U. K.....	50,000
do do Continent..	20,000

The imports into the United Kingdom for the past week, the previous week and for the same week in previous year were as follows:

	1890. April 22.	1890. April 15.	1889. April 23.
Wheat, qrs.....	167,000	292,000	155,000
Corn, qrs.....	166,000	251,000	139,000
Flour, bbls.....	178,000	275,000	95,000

Wednesday brought less active, more irregular and lower closing markets, on better crop reports, on a check to public buying, and on realizing by some of the heavy bulls. April wheat closed at 95½c., or 1½c. below Tuesday's closing. Receipts were 71,635, exports 13,089, and options 4,560,000 bushels. April corn ruled at 42¼c., with receipts 282,931, exports 637,511, and options 600,000 bushels. April oats closed up at 33½c., with receipts 111,790, exports 52,465, and options 250,000 bushels. Wheat flour was dull and steady, with a tendency to become easier in sympathy with wheat. The receipts were 12,311 sacks and 44,805 barrels, exports 54,474 sacks and 8,242 barrels. The minor lines were unchanged. The bears were using every possible, or impossible, influence to start a break in wheat grain and flour, but without success. Great stress was laid upon the Detroit report that Michigan's winter-wheat condition is really 87, against the 67 in the last government report.

Thursday brought no decided changes in conditions. April wheat closed at 95½c., with receipts 37,200, exports 74,252, spot sales 58,000, and options 4,320,000 bushels. April corn closed at 43c., with receipts 67,900, exports 184,000, spot sales 271,000 and options 1,066,000 bushels. April oats closed at 33½c., with receipts 72,000, spot sales 178,000, and options 645,000 bushels. Rye grain was strong at 59½c. for State, and 60c. for Canada. Barley malt was strong at 62½c. for 2-rowed State, 72½c. for 6-rowed State, and 75c. for Canada. Feed was firm at 72½c. for bran, 87½c. for midlings, and 80c. for rye feed.

Wheat flour was quiet and weaker, with receipts 26,500 and sales 17,100 packages. Prices included the following: Low extras \$2.40@2.90; city mills \$4.30@4.65; city mills patents \$5.00@5.75; winter wheat low grades \$2.40@2.90; fair to fancy \$3.10@4.65; patents \$4.50@5.25; Minnesota clear \$3.60@4.45; straights \$3.85@4.90; patents \$4.65@5.65; rye mixtures \$3.65@4.15; superfine \$2.25@2.75.

Rye flour was firm at \$2.90@3.35. Cornmeal was steady at \$2.10@2.45. The Minneapolis mill last week ground 121,170 barrels of flour. Minnesota reports spring-wheat sowing accomplished under favorable conditions.

#### BUFFALO MARKETS.

WHEAT—There was a very quiet market to-day. Two cars of No. 1 hard wheat were sold at 88c., and 1,100 bushels of No. 1 Northern at 97½c. There was a sale of 10,000 bushels of No. 1 hard, c.i.f., at p.n.t. Winter wheat was dull. Some No. 2 red was sold at 93½c. and a little at 94½c. No. 1 white is held at 93c. and No. 3 red extra at 90c. in store. CORN—The market opened steady at former prices, but closed dull and easier. No. 2 yellow sold at 37½c. in store and 38½c. on track. Fancy No. 3 yellow sold at 38½c. on

track, and No. 3 yellow 37½c. Some No. 4 yellow was sold at 37½c. No. 2 corn was sold at 37c. early, but afterwards it went at 36½c., and 16,000 bushels were sold at p.n.t. No. 3 corn closed at 36½c., and No. 3 white sold at 35½c. OATS—There was a steady feeling to-day with not a great deal of trading. No. 2 white sold at 32½c. on track, and ten cars were sold to arrive at 32c. No. 3 white was sold at 31½c. and No. 3 mixed at 30½c. RYE—Quotations are at 55c. for No. 2 in store, but no sales are reported. BARLEY—Maltsters are wanting barley now but supplies are running short. No. 1 Canada is held at 68c.70c., and No. 2 at 65c. OATMEAL—Akron, \$5.45; Western, \$5.25 per bbl.; rolled oats, in cases, 72 lbs., \$3.25. CORNMEAL—Coarse, 75c.85c.; fine, 80c.90c.; granulated, \$1.50 per cwt. MILLFEED—City-ground coarse winter, \$14.50@15.00 per ton; fine do. \$14.50@15.50; finished winter middlings, \$15.00@16.00; coarse spring do, \$14.00@14.50.

#### FLOUR MARKET.

Spring Wheat	Winter Wheat.
Patents ..... \$5.50@6.25	Patents .. \$4.75@5.50
Straight..... 4.50@5.25	Straight... 4.25@5.00
Bakers..... 3.50@4.25	Clear .. 3.75@4.50
Red Dog... 2.50@3.00	Low grades 2.50@3.25
Retail prices 50c per bbl above these quotations.	
Buckwheat flour \$1.40@1.75 per 100 lbs.	

Baron Liebig, the great German chemist, says that "as much flour as can lie on the point of a tableknife contains as much nutritive constituents as eight pints of the best and most nutritious beer that is made." Yet eight pints of the beer sell for about \$1, and \$1 will buy about 35 pounds of flour. These figures suggest the really enormous wastage of the annual drink bills of "civilized" nations, and they explain about 99 per cent. of the poverty and misery, the crime and insanity, that cost modern society so dearly in every way.

Sometimes  
Corrugated Iron is  
represented to be  
"just as good as" our  
Patent Edge Corrugation.  
While this is  
complimentary to  
our material,  
unfortunately it does  
not work out well  
in practice:  
The only Corrugated Iron  
that can be  
recommended for roofing  
is manufactured by

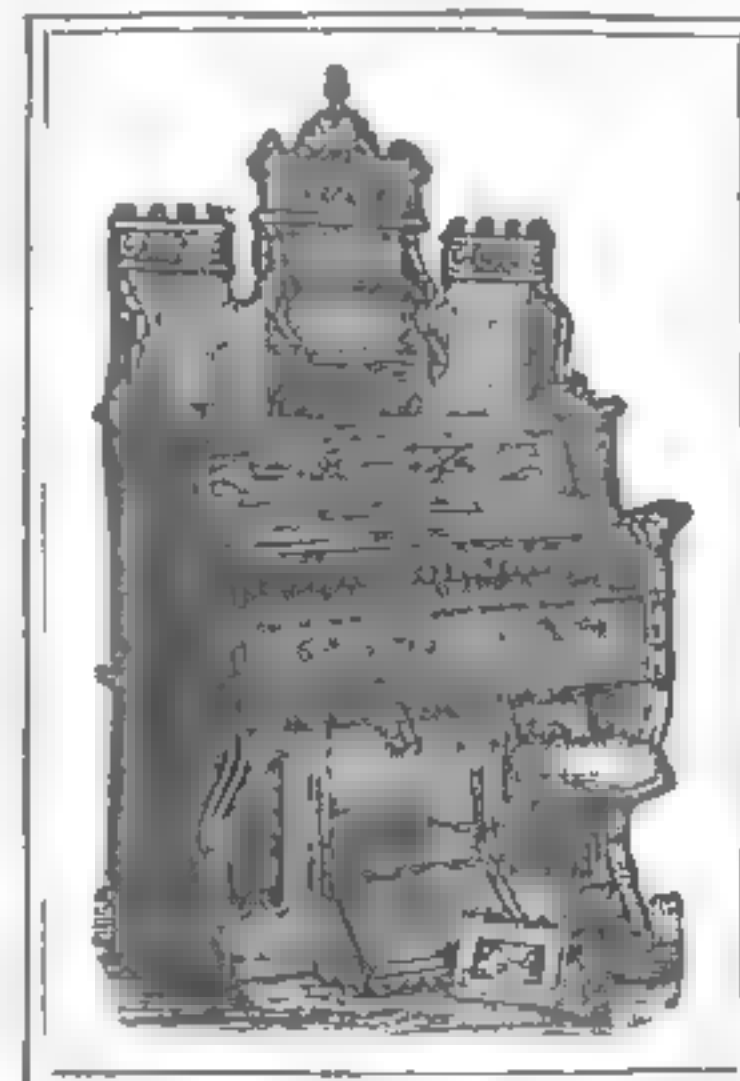
The Cincinnati Corrugating Co.  
PIQUA, OHIO.

## The BEST PIANOS and ORGANS

IN THE WORLD

Are manufactured and sold for the least money  
by

THE BEST ARE THE CHEAPEST.



Write us for Illustrated Catalogue, Free.

**BEETHOVEN**  
PIANO ORGAN CO.  
WASHINGTON WARREN CO. N.J.

MENTION THIS PAPER.





**RELIANCE OIL & GREASE CO., CLEVELAND, O.,**

—MANUFACTURERS OF—

**Finest Lubricants for Milling Plants. A Challenge to the World.**

WRITE US.

"VALVE OLEINE"—875 Degrees Fire Test, Cylinder Oil.

"RUSSIAN"—Engine and Machine Oil.

"CHIEF"—Roller Mill Lubricant.

"ANCHOR"—Roller Mill Grease.

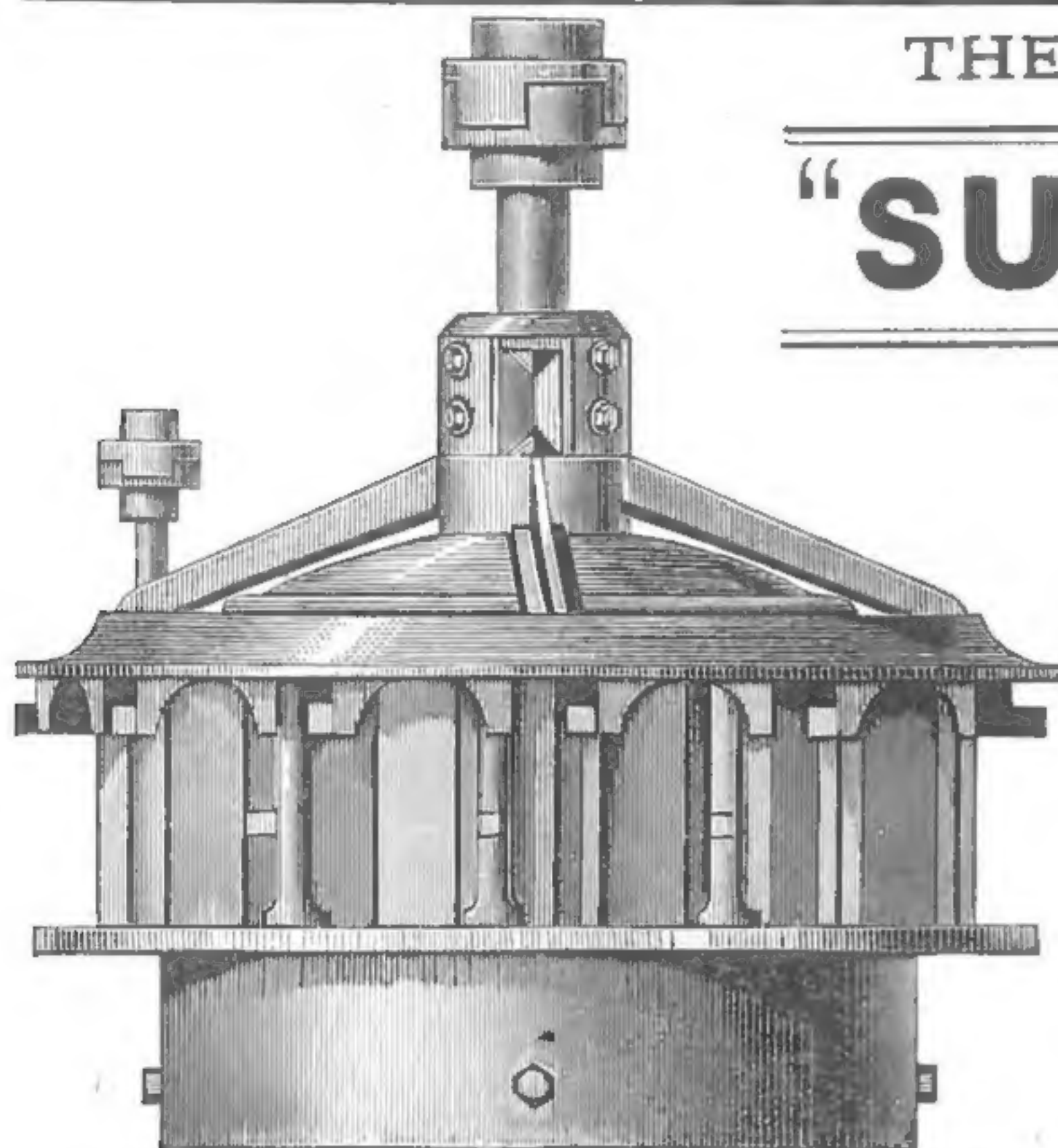
"NIAGARA"—Belt Grease.

"CHELSEA"—Scale Solvent, Best on Market.

Agents Wanted.

**FREE—SAMPLES, CATALOGUE, AND ALL INFORMATION.**

SPECIAL  
HIGH GRADE  
PRODUCTS



## THE IMPROVED "SUCCESS"

### PERCENTAGE:

Full Gate, - - 86.29

$\frac{7}{8}$  Gate, - - - 86.07

$\frac{3}{4}$  Gate, - - - 81.90

—(0:)—

This Wheel is Both Durable and Cheap. Send for Pamphlet to

**S. MORGAN SMITH**  
YORK, - PA.

—SAMPLE OF—

## C. O. BARTLETT'S PRICES

FOR STEEL ELEVATOR BUCKETS AND BELTING.

### STEEL ELEVATOR BUCKETS.

SIZE.	PRICE.
3x3.....	4c
4x3.....	6c
5x4.....	9c
6x4.....	13c
8x5.....	18c

### LEATHER.

SIZE.	PRICE.
4 inch.....	20c
5 ".....	25c
6 ".....	32c
8 ".....	40c
10 ".....	52c

### RUBBER.

SIZE.	PRICE.
4 inch.....	13c
5 ".....	17c
6 ".....	20c
8 ".....	28c
10 ".....	36c

### COTTON.

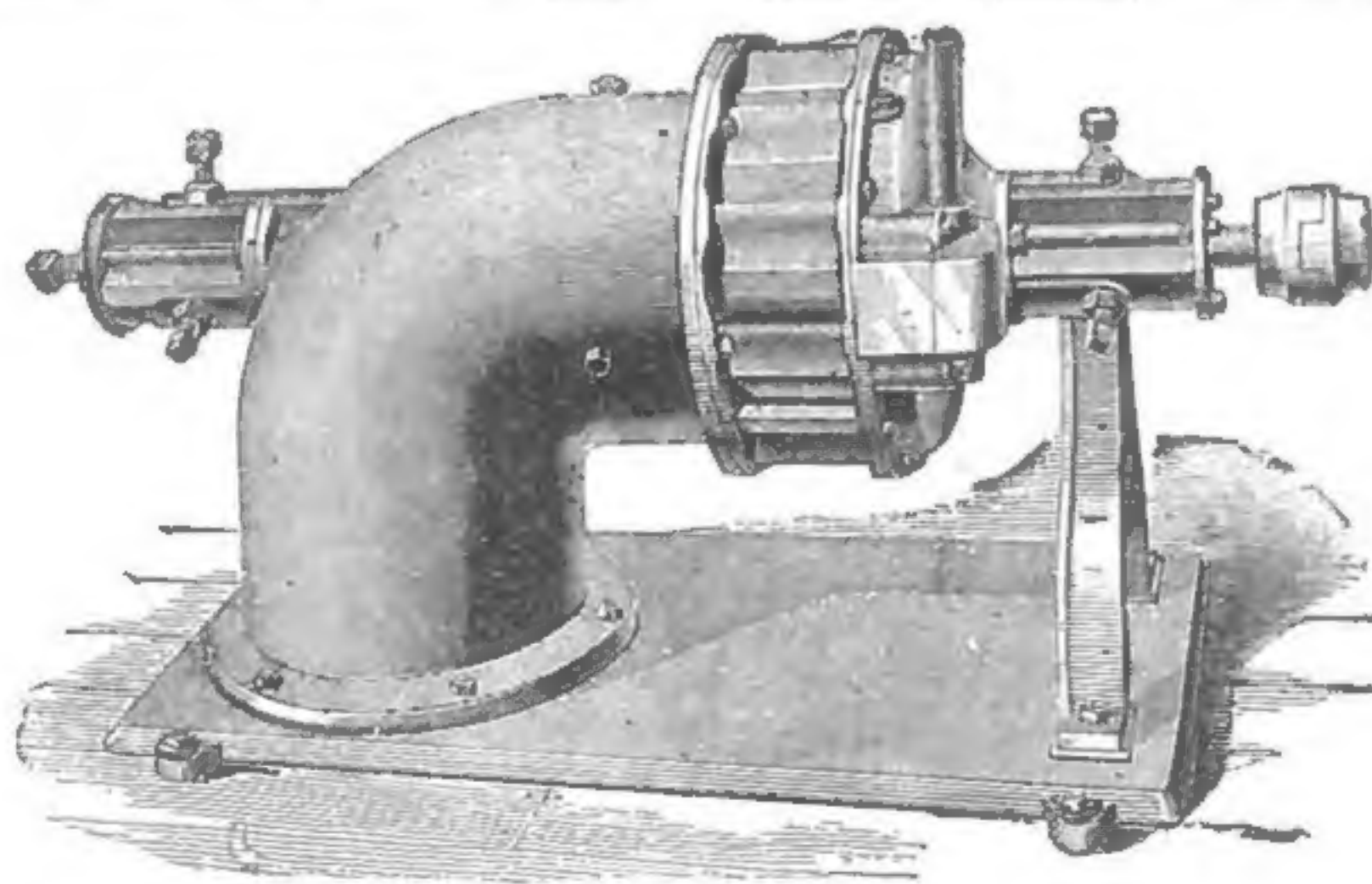
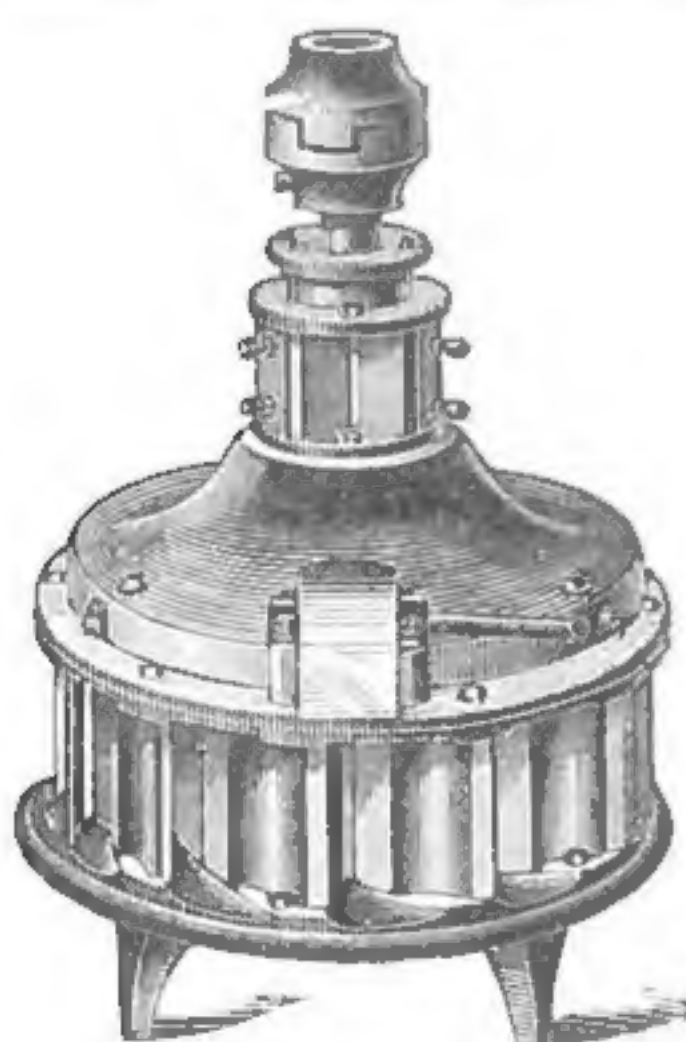
SIZE.	PRICE.
4 inch.....	7c
5 ".....	8c
6 ".....	10c
8 ".....	13c
10 ".....	16c

**C. O. BARTLETT, CLEVELAND, OHIO.**

**WHEN WRITING TO ADVERTISERS**

PLEASE MENTION

**THE MILLING WORLD.**



## BURNHAMS NEW IMPROVED STANDARD TURBINE WHEEL, ON VERTICAL OR HORIZONTAL SHAFT.

IT WILL PAY INTERESTED PERSONS TO INVESTIGATE THE MERITS OF THIS WHEEL BEFORE PLACING THEIR ORDER. SEND FOR NEW CATALOGUE.

**BURNHAM BROS., YORK, PA.**

### "ELECTRIC" BELT DRESSING.

A WONDERFUL LEATHER PRESERVATIVE, suitable for Leather, Rubber, Cotton or Rawhide Belting. Belts dressed with this dressing will last twice as long and transmit 100 per cent. more power. Save your Belting and prevent heating of journals by running them under a reduced tension. Sold on approval to responsible parties. SEND FOR CIRCULARS.

**BUFFALO SPECIALTY MFG. CO.,**  
67 & 69 Washington Street, BUFFALO, N. Y.

\* **THE INK** \*  
WITH WHICH THIS PAPER IS PRINTED  
IS MADE BY THE  
**QUEEN CITY PRINTING INK CO.**  
CINCINNATI, O.



THIS WHEEL GIVES HIGH RESULTS, AND IS ACKNOWLEDGED THE BEST, MOST PRACTICAL AND EFFICIENT TURBINE MADE. FOR SIMPLICITY, DURABILITY, AND TIGHTNESS OF GATE IT HAS NO EQUAL.

State requirements and send for Catalogue to

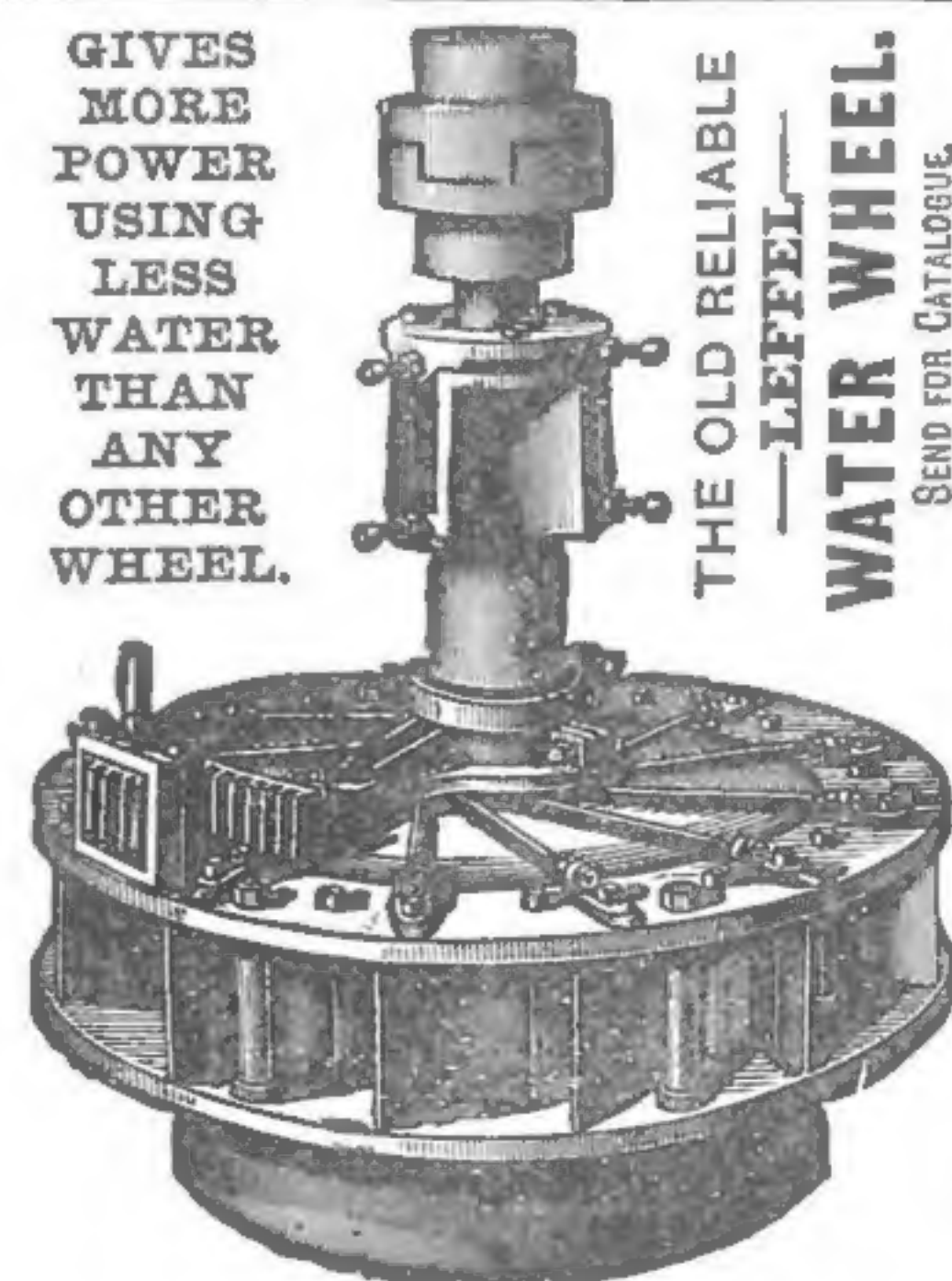
**T. C. ALCOTT & SON,**  
**MOUNT HOLLY, N. J.**

GIVES  
MORE  
POWER  
USING  
LESS  
WATER  
THAN  
ANY  
OTHER  
WHEEL.

THE OLD RELIABLE  
—LEFFEL—

**WATER WHEEL.**

SEND FOR CATALOGUE



**JAMES LEFFEL & CO.**  
SPRINGFIELD, O., OR 110 LIBERTY ST., N. Y.

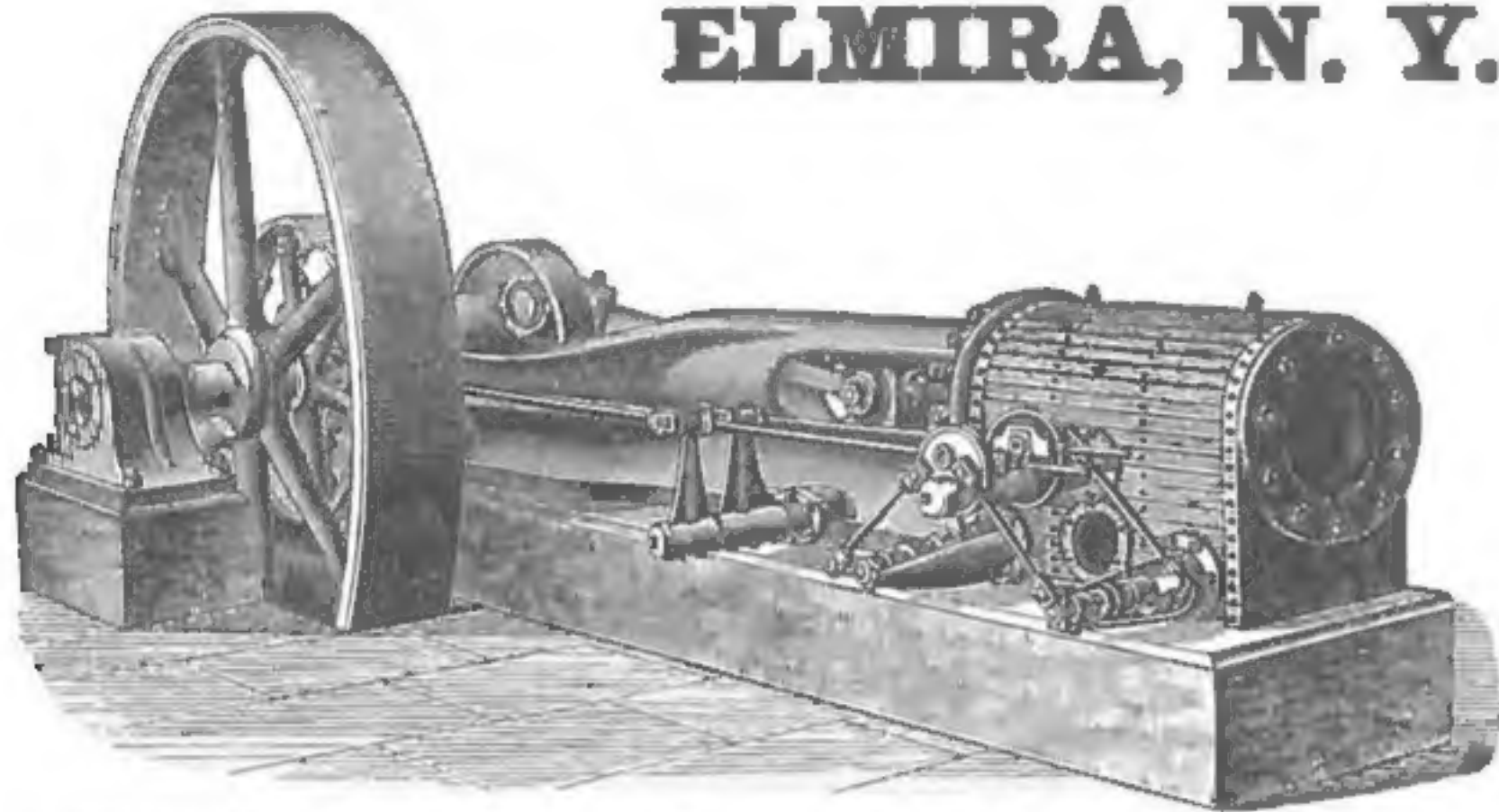


# PAYNE HIGH SPEED CORLISS ENGINE

SHAFT GOVERNOR COMBINED WITH CORLISS WRIST-PLATE.  
ECONOMY OF FUEL.

REGULATION EQUAL TO ANYTHING IN USE.

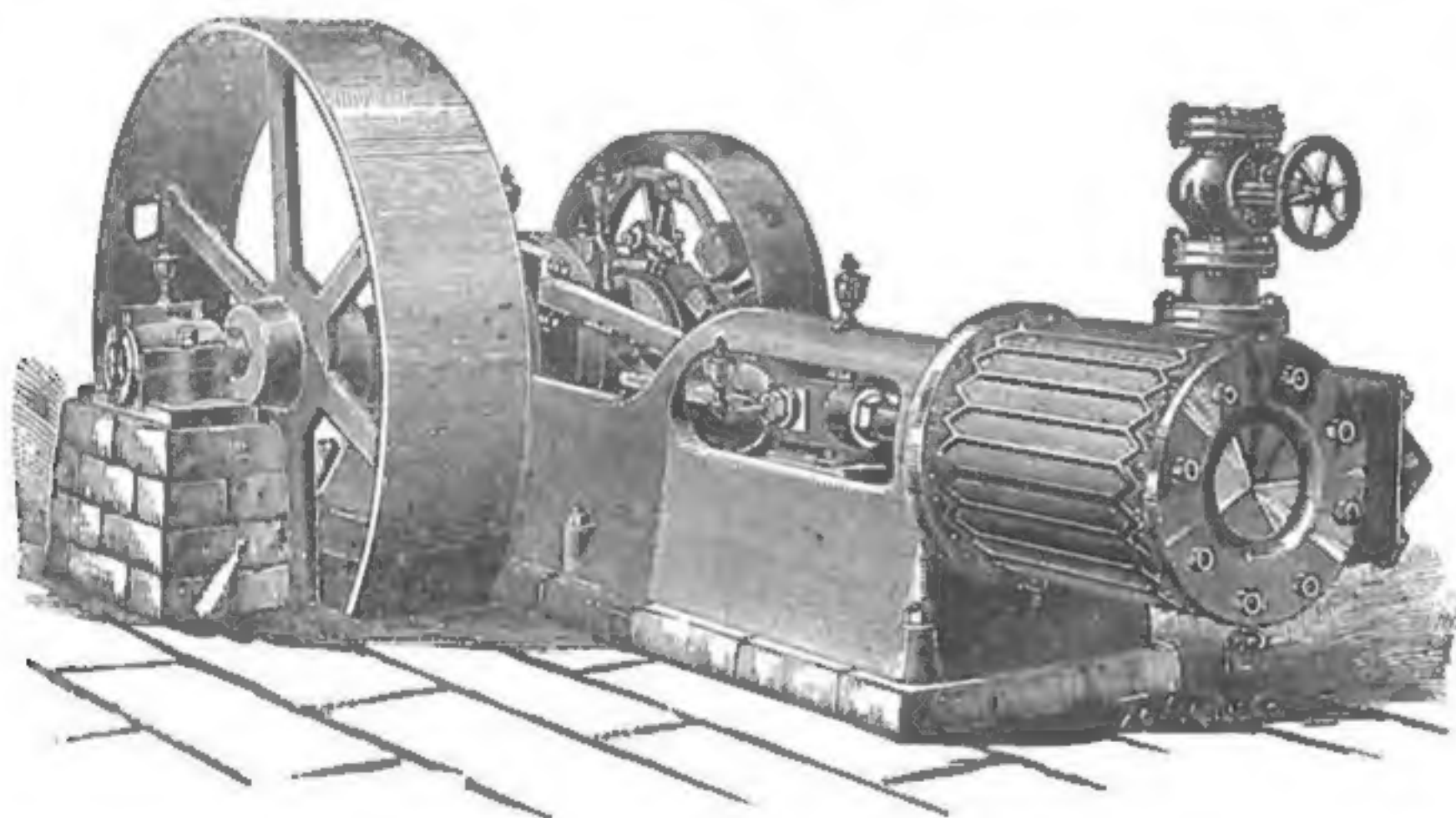
**B. W. Payne & Sons,**  
ELMIRA, N. Y.



10 S. Canal Street.  
CHICAGO, ILL.  
45 Dey Street  
NEW YORK.  
Hill, Clark & Co.  
BOSTON, MASS.

AUTOMATIC ENGINES FROM 2 TO 200 HORSE POWER.

## Economic Power Plants



Especially Adapted to Electric Lighting and

**WOOD-WORKING ESTABLISHMENTS**

MANUFACTURED BY

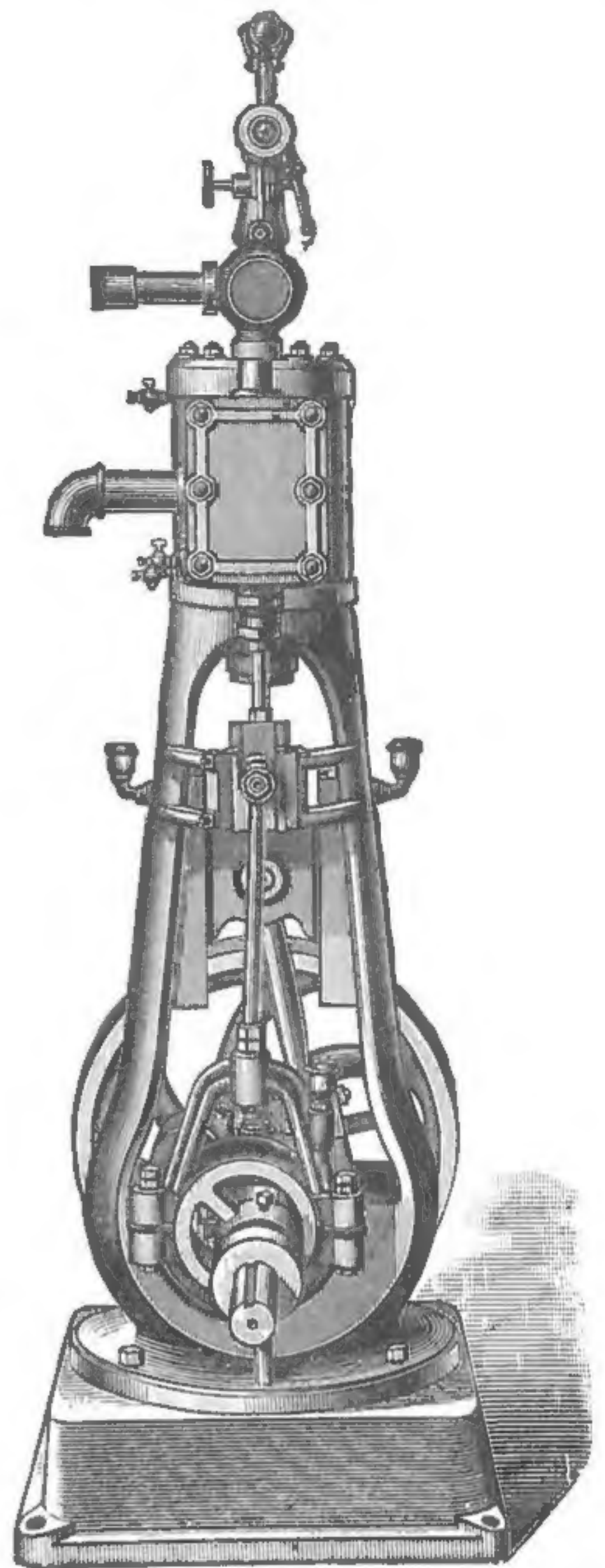
**VALLEY IRON WORKS, WILLIAMSPORT, PENN.**

Please Send for Our New Catalogue and Mention "The Milling World."



BRANCH HOUSE, 1425 EAST MAIN STREET, RICHMOND, VA.

# AUTOMATIC VERTICAL ENGINES



Especially adapted for Small Electric Light Plants.  
Perfect Regulation. Reversible Link Motion for Marine Use. Five to Fifteen Horse Power. Also manufacturers of

**Lathes and Special Tools**

Metal Patterns, Models and Machinery Built to Order  
Send for Prices and Specifications.

**Lloyd & Sterrett**

COR. 16TH AND STATE STS.,

ERIE, - - PENN.



**MOORE'S  
PATENT**

**BARREL HEATER.**  
For all kinds of cooperage. Thousands in use in all parts of the U. S. Send for Circular.

JOLIET STOVE WORKS. JOLIET ILL.



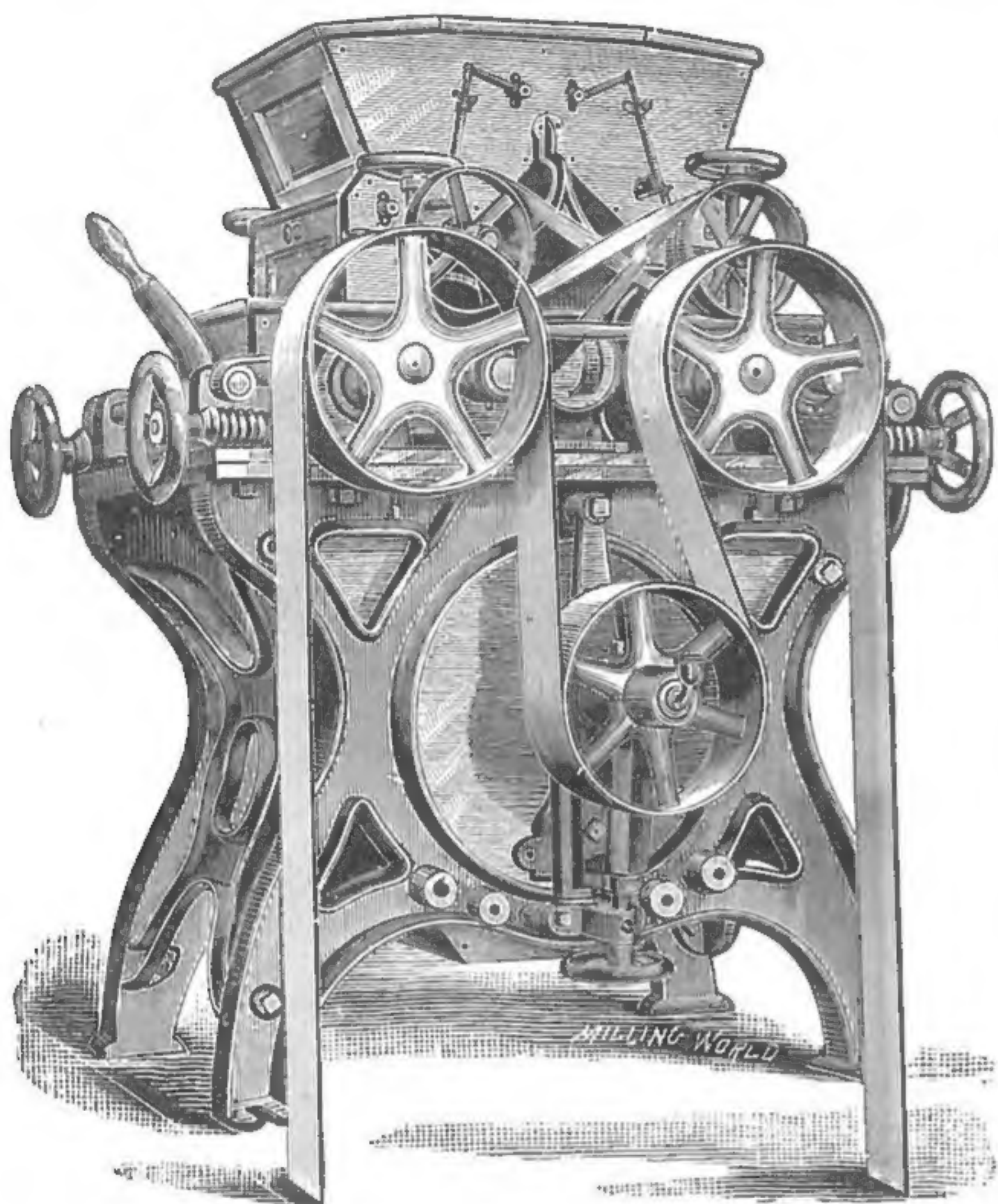
# KEEP YOUR BELTS FROM SLIPPING

And Save Your Power by Using FRICTION COVERING for Pulleys. Agents Wanted. Satisfaction Guaranteed- Easily Applied. No Rivets. Effective.

**NATIONAL PULLEY COVERING CO., BALTIMORE, MD.**



# JOHN HUTCHISON MFG. CO., Mill Builders and Mill Furnishers.



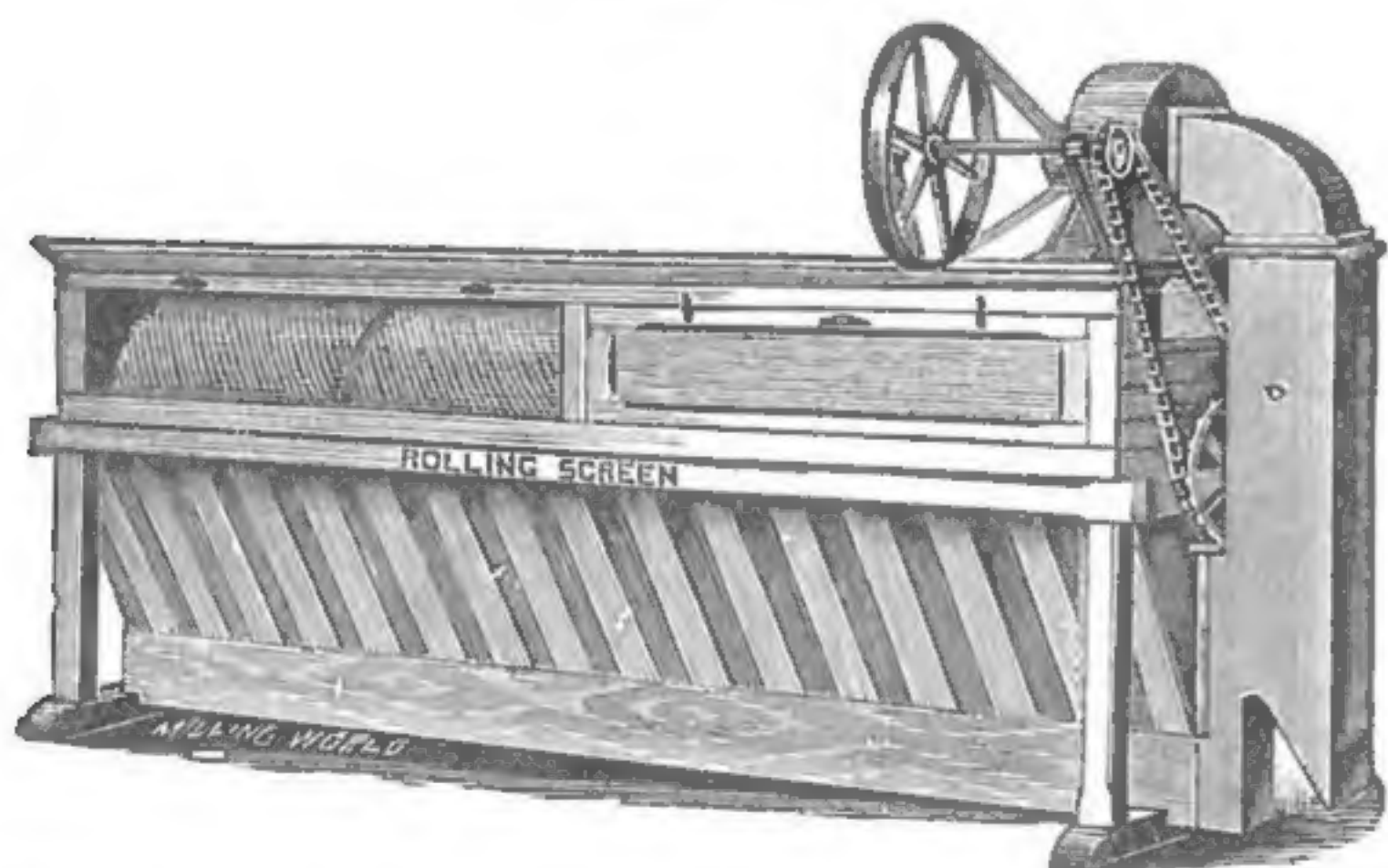
"The Rickerson." The original six inch 4 Roller Mill. We now own the patents on this mill and after greatly improving the mill manufacture them in four sizes:

6x12 inch.

6x18 inch.

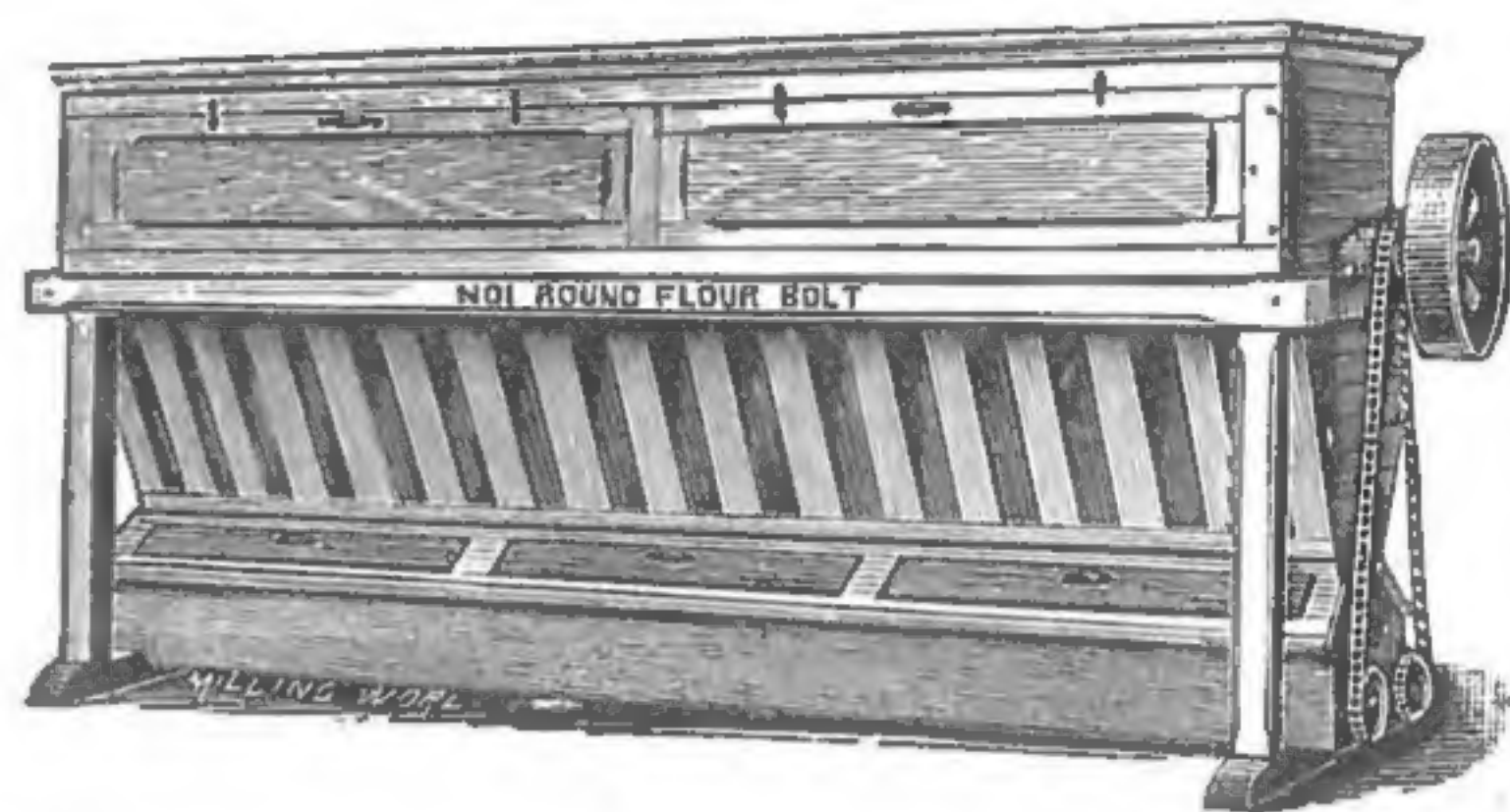
6x15 "

6x20 "

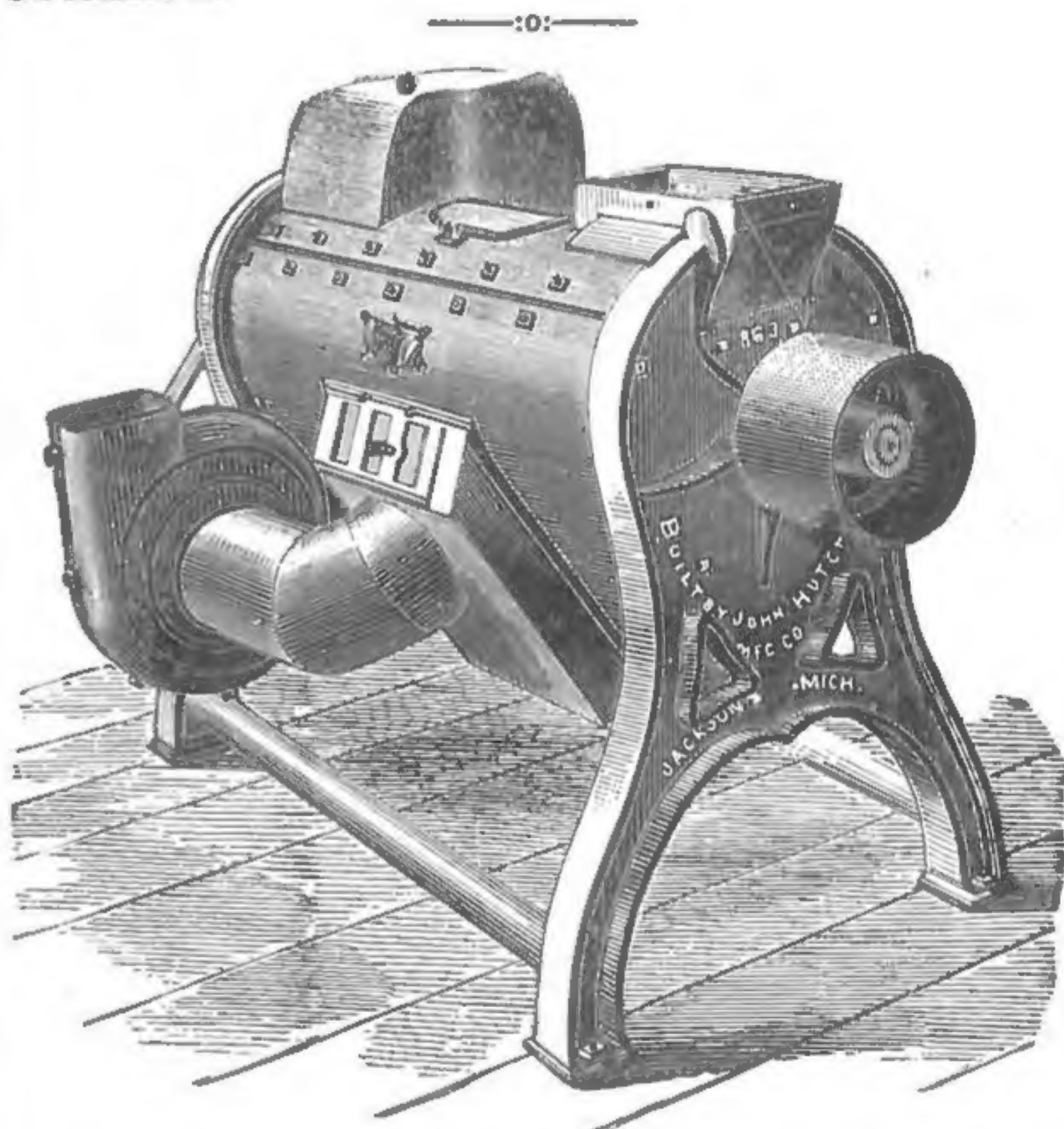


The above cut represents our New Rolling Screen, which is absolutely dustless and has as much scouring qualities as any two scouring machines now being made.

Send for Estimates for Our Full Roller Mills of any Capacity.



The above cut shows our New Round Slow Running Flour Bolt. We also build a Cylinder or Round Scalping Reel and we have lately built a number of new mills of medium capacity, using our Roller Mills, our Round Flour Bolts and Scalping Reels, getting better results than is usually obtained.



Hutchison's New Dustless Iron Corn Sheller, especially adapted for Mill and Elevator use.

—:ADDRESS ALL CORRESPONDENCE TO:—

## John Hutchison Mfg. Co.

JACKSON. . . MICHIGAN.





ELEVATOR BUCKET.

## ✻ CORRUGATIONS ✻

What we know of corrugations can be found out by writing to US, or H. W. Caldwell, Chicago, Ill.

Stamping and Pressing of Sheet Metals for all Classes of Work. Also Tinning, Galvanizing and Japanning.

THE AVERY STAMPING CO.,

Cleveland, Ohio, U. S. A.

New York Office, 51 Cliff Street, HALL & NEAR, Agents.



CALDWELL'S PATENT.



SELF-TRAMMING

## PORTABLE MILL

BEST GRINDING MILL MADE.

## BOLTING CLOTH

AND

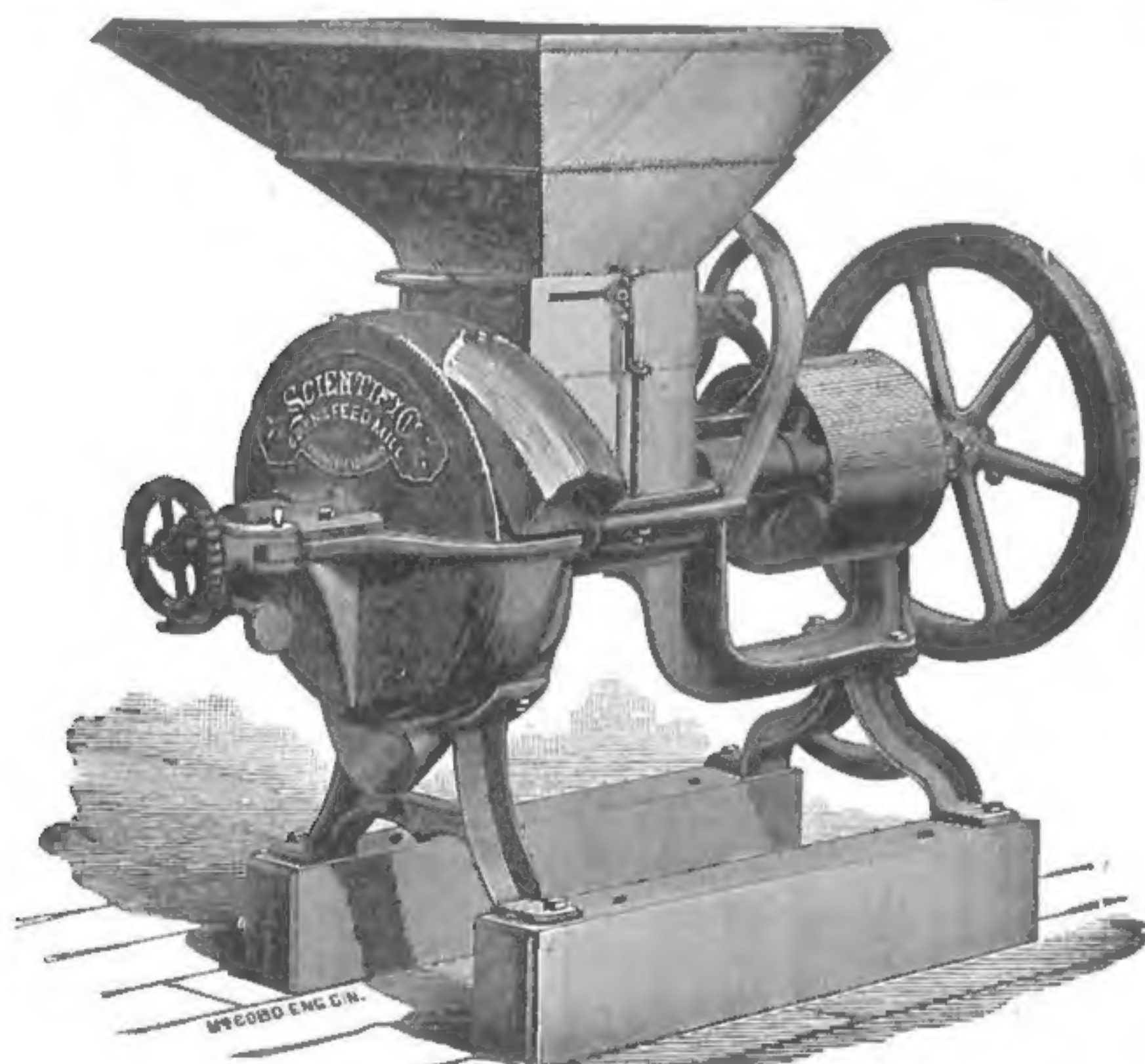
## BURR AND ESOPUS MILLSTONES

WRITE FOR DISCOUNTS.

## SAMUEL CAREY,

17 Broadway,

NEW YORK.



## —THE SCIENTIFIC— GRINDING MILL.

POSITIVELY THE BEST MILL ON EARTH.

GRINDS PERFECTLY, EAR CORN, SHELLLED CORN,  
AND ALL GRAINS.

## GRINDING PLATES A SPECIAL METAL

*Hard as Steel, Guaranteed to Grind from Five to Eight  
Thousand Bushels before wearing out.*

SEND FOR ILLUSTRATED CATALOGUE, PRICES, ETC.

## THE FOOS MFG. CO.

SPRINGFIELD OHIO.

## THE SALEM BUCKET STILL ON TOP!



—AND IS LIKELY TO—

## HOLD ITS PLACE

As Leader of Buckets because it proves to be

## —THE BEST—

And the cheapest in the long run after all.

Send for New Catalogue and Revised Price List.

## W. J. CLARK & CO., SALEM, OHIO.

THORNBURGH & GLESSNER, CHICAGO, ILL.